Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

34 Mr

Eating Places as MARKETERS of FOOD PRODUCTS

A Research and Marketing Act
Contract Report

U.S. DEPARTMENT OF AGRICULTURE
LIBRARY
BELTSVILLE BRANCH

Marketing Research Report No. 3

BUREAU OF AGRICULTURAL ECONOMICS
UNITED STATES DEPARTMENT OF AGRICULTURE
in cooperation with
THE DIVISION OF AGRICULTURAL ECONOMICS
THE UNIVERSITY OF MINNESOTA

WASHINGTON, D. C.
1952

FOREWORD

The purpose of the study upon which this report is based was to investigate the role of eating places in the marketing of food products. The practice of eating away from home has increased markedly since the beginning of World War II. It is important to know more about this market for farm products: how big it is, what foods are bought, what it costs, and how it affects farm income. It is only through catering to consumer preferences as to types of food and services desired in the marketing of food products that producers and marketing agencies can adjust production and distribution properly.

For many years, the Department of Agriculture and the State Agricultural Experiment Stations have studied changes in the total demand for food, consumption of food in family households, and farm to retail price spreads. Little information has been made available, however, about the quantity of food consumed in eating places or about the marketing practices and costs associated with this industry.

This study was undertaken jointly by the Bureau of Agricultural Economics and the University of Minnesota as a first step in the investigation of this field and was conducted under authority of the Agricultural Marketing Act (RMA Title II). The study necessarily was limited in scope, covering only Minneapolis and Fairmont, Minn. But we believe that the results from these cities will apply in many other cities and small towns throughout the country. Doubtless other studies are needed. We hope that the procedures developed in this pilot study will encourage further research.

O. B. Jesness, Chief
Division of Agricultural Economics
University of Minnesota

Frederick V. Waugh, Assistant Chief
Prices, Income, and Marketing
Bureau of Agricultural Economics

CONTENTS

Page

Summary of major findings and conclusions iii
Statements of the problem and the approach used v
Chapter 1.- Sources and limitations of basic data relating to the eating-place industry 1
Chapter 2.- Description of the eating-place industry 8
Chapter 3.- Marketing agencies that supply food to eating places in Minneapolis and Fairmont 20
Chapter 4.- Buying and management practices 27
Chapter 5.- Functions and costs of eating places 32
Chapter 6.- Efficiency of eating places as marketers of food products 47
Chapter 7.- Foods purchased by eating places 59
Chapter 8.- Average quantities of major foods consumed per person per week in five types of Minneapolis public eating places 74
Chapter 9.- Relative importance of eating places in food marketing 85

Appendix

A.- Classification schedule 95
B.- Detailed analysis of interviews with restaurateurs ... 97
C.- Census definition of eating and drinking places 110
D.- Statistical methods used 111
E.- Extent of purchasing in wholesale units 113
F.- Typical restaurant operating percentages, 1940 115
G.- A study of kitchen trimmings and plate waste in a university cafeteria 116

SUMMARY OF MAJOR FINDINGS AND CONCLUSIONS

1. In 1948 an estimated 16 percent of the total civilian food supply of the United States was marketed by eating places, institutions, and other large-scale feeding establishments. Of the food supply for Minneapolis, Minn., 18 percent was so marketed, and of that for Fairmont, Minn., a small city, 16.5 percent.

2. Larger Minneapolis eating places buy most of their food supplies from special purveyors and wholesalers; smaller places frequently buy from retail food stores.

3. Eating places often require extra services of their suppliers in the forms of specific quantities of particular items and frequent deliveries to reduce the need for carrying large inventories. For these and other services, they tend to pay a little more than the wholesale price quoted to retailers but less than the regular retail price paid by consumers. Many small firms buy at retail stores because of their small volume of purchases of non-staple items and because such a practice affords them greater flexibility in meeting meal-to-meal requirements.

4. Eating places sell food, personal services, and the use of capital. Charges made for labor and capital often equal or exceed the cost of the food materials. Food costs of 20 Minneapolis firms averaged 44 percent of the total sales value in 1949. The average for 13 Fairmont firms was 52 percent.

5. Consumers measure the efficiency of eating places in terms of menu prices; agricultural producers in terms of charges made for marketing services and effect on total food consumption; and owners of eating places in terms of net profits earned.

6. The marketing efficiency of eating places is not easily measured. The two major costs are food and labor. If less service is given with meals, costs of labor make up a smaller proportion of the total, as in the case of cafeterias, and costs of food may be proportionately larger. Gross margins of all types of firms above labor and food costs are somewhat similar.

7. Eating places in department stores are often partially subsidized because they are used to attract customers. Similarly, meals may be subsidized in establishments with heavy sales of alcoholic beverages.

8. In 1948, commercial eating places accounted for 80 percent of total sales of meals in Minneapolis and private eating places for 20 percent. Street restaurants sold more than half of the meals sold.

9. Volume is concentrated to a considerable extent in large eating establishments, both commercial and noncommercial, as indicated by the fact that 237 establishments, representing 18 percent of the 1,285 establishments that served meals in Minneapolis in 1948, accounted for 59 percent of the total sales of meals.

10. In Minneapolis and Fairmont, a larger proportion of expenditures for food goes for meats, poultry, and fish in public eating places than in retail food stores for home consumption, with less for fresh fruits and vegetables and other foods.

11. Case studies in 14 Minneapolis public eating places indicated that per capita food-consumption rates for meat, fish, and poultry were more than twice as large in high-priced cafes and hotels as in Minneapolis-St. Paul family households and in the United States as a whole. But rates of consumption of meat, fish, and poultry in moderate-priced eating places were much more similar to the Minneapolis-St. Paul family household and the national average consumption rates.

12. Per capita rates of consumption for fats and oils, potatoes, frozen vegetables and fruits, and coffee in the public eating places studied were generally higher than rates in the family households in Minneapolis-St. Paul sampled in 1948, and also above the national averages. Rates of consumption for canned and fresh fruits and vegetables, dairy products, and eggs varied widely among the several types of establishments, both above and below the household rates and national averages.

STATEMENTS OF THE PROBLEM AND THE APPROACH USED

Restaurants, hotels, and other establishments that serve meals to the public are important processors and distributors of agricultural food products. As public eating places sell personal services as well as food, their operations and costs differ significantly from those of retail food stores which supply food for home consumption. Furthermore, the patterns of food consumption away from home apparently vary in certain outstanding respects from those of household consumption. Accordingly, the demand for agricultural food commodities for preparation and sale in this type of food market has special characteristics which merit consideration by producers and distributors of food.

Sales of meals and related food items and the meal value of food furnished patrons by all types of eating places, public and private, amounted to 10.5 billion dollars in 1948. This was about 23 percent of the market value of all food sold in that year. 1/ Despite the importance of this industry, relatively little information is available concerning the marketing aspects of its operation. It is a decidedly heterogeneous industry. Many eating places are small and owned by one or a few persons. In 1948 only 6 percent of the eating places of the country were incorporated. 2/ Published financial statements are rare, in contrast to the published statements of large industrial and other corporations whose securities are traded in the stock exchanges. Data relating to gross margins therefore are not commonly available. The necessity of relying generally upon invoices for information as to purchased quantities and values complicates the assembly of data. Eating places perform many individual personal services and varying amounts of processing are done in their kitchens. Consequently, the functions of eating places are probably less standardized than those of some other industries, such as food retailing.

Those characteristics of eating places which had hitherto discouraged research dictated that the approach to the problem would be a small-scale pilot study, which would use a combination of random sampling and case-study methods. This publication reports the results of such a study of eating places in Minneapolis and Fairmont, Minn., which was carried on in 1949-51 by the University of Minnesota in cooperation with the Bureau of Agricultural Economics. The study dealt primarily with public eating places. Its major objectives were to develop procedures for studying the importance of eating places as marketers of food; to assemble certain basic information as to management practices and costs of food and services of such agencies; to conduct sample surveys of eating places in one large city and one smaller city, in order to explore the possibilities of obtaining original data concerning management practices, costs of operation, sources and methods of purchase, and quantities of food handled; and to evaluate the opportunities for further research in this field.

1/ From table 34, chapter 9.

2/ See data in U. S. Census of Business, Retail Trade, Series BC-3-R-6C.

The surveys in Minneapolis and Fairmont were made as a first step toward accurate evaluation of the national role of eating places as a market for food. These two cities are not necessarily typical of the national situation, but they were believed to be suitable for the specific objectives of the pilot study. The Bureau of Human Nutrition and Home Economics of the United States Department of Agriculture had conducted a survey of family food consumption in Minneapolis-St. Paul 3/, which provided comparative data on family food consumption. Fairmont was chosen as a smaller city in which there were prospects of good cooperation by the industry.

Random samples were chosen from a list of all public eating places in Minneapolis. Each sample firm was visited by the director of the study, who filled in the classification part of the questionnaire by observation. The second part of the questionnaire dealt with buying and management practices and was answered by the restaurant operator in response to questions read by the study director. Next, several restaurateurs in each major type of eating place were invited to cooperate in the detailed survey, and they permitted the research workers to copy purchase records and inventories and to tabulate sales data. The sets of data obtained from these cooperating eating places form case studies within major strata of the industry. The nonrandom selection of the firms fails to fulfill the requirements of probability sampling. However, utilization of the two approaches has been satisfactory for this pilot study. 4/

This report begins with a review of existing information pertaining to the marketing of food through eating places, describes the eating-place industry in the United States as a whole, and in the sample cities, Minneapolis and Fairmont, Minn. It then describes and analyses the marketing facilities used to supply the trade and the buying and other management practices of sampled firms. The services of public eating places and their specialized requirements are described and pertinent data as to costs are presented and analyzed. Some comparisons with operations and costs of retail food stores are included. This leads to a discussion of the efficiency of eating places as marketers of food products.

The patterns of food purchases of the case-study firms are given in detail for major food items, then are used with other information to derive the patterns for all eating places in the two cities. Finally, they are compared with patterns of all food sales direct to consumers in these cities and in the United States. For other comparisons, approximations of per capita consumption rates in several types of public eating places in Minneapolis are developed. Finally, the relative importance of eating places in food marketing for the United States and for the two selected cities is evaluated on several bases.

3/ Family Food Consumption in Minneapolis-St. Paul, Minnesota, Winter 1948, 1948 Food Consumption Surveys, Preliminary Report No. 2, Bureau of Human Nutrition and Home Economics (Processed).

4/ See appendix D for further details on statistical methods used.

EATING PLACES AS MARKETERS OF FOOD PRODUCTS

By Lester C. Sartorius, formerly Research Associate, Division of Agricultural Economics, University of Minnesota, with the collaboration of Marguerite C. Burk, Agricultural Economic Statistician, Bureau of Agricultural Economics. [5]

CHAPTER 1.- SOURCES AND LIMITATIONS OF BASIC DATA RELATING TO THE EATING-PLACE INDUSTRY

The first phase of the study was the bringing together and analysis of all existing data concerning the marketing aspects of the eating-place industry. The inadequacies of such information as well as obvious limitations of pilot surveys in only two cities make it necessary to recognize immediately the tentative character of the findings of a study based on such data. They should be viewed as indicative rather than conclusive. Accordingly, this chapter points out the major problems that were encountered in the process of gathering pertinent information for the analysis. It describes both existing and new data collected in the course of this study and evaluates their adequacy for analysis of the marketing operations of eating places. Although considerable care was taken to obtain reliable supplementary information from special surveys and the case studies of individual firms were related as closely as possible to strata within the industry, the scope and coverage of the surveys were so limited that no far-reaching conclusions can be drawn. This fact is emphasized throughout the report.

A comprehensive study of eating places as processors and distributors of food products should include information as to the size and composition of the industry; sources of food supplies and buying practices; analyses of special marketing functions performed and costs involved; appraisal of the efficiency of operations of eating places; description of the patterns of food purchases and the patterns of consumption, including, if possible, determination of the quantities of food consumed per person in public eating places; and finally, estimation of the proportion of the total food supply distributed through eating places. This chapter describes for each of these problem areas the types of information needed for the analysis, the information already available, the additional information collected in the course of this study, then indicates the adequacy of the total information available.

---

[5] Lester C. Sartorius was responsible for all field work, statistical analysis, and certain phases of other original research. Marguerite C. Burk collaborated in planning the study and in drafting and completing this report. She also developed the estimates of the distribution of the United States food supply. The project was under the general supervision of Warren C. Waite (deceased) and O. B. Jesness, both of the University of Minnesota, and D. B. DeLoach, Bureau of Agricultural Economics. Grateful acknowledgment is made of the assistance given by Colonel Paul Logan and other officials of the National Restaurant Association; by Fern Gleiser and Charles Rovetta of the Restaurant Administration Program, University of Chicago; and of the cooperation of those owners and managers of eating places in Minneapolis and Fairmont who participated in the study.

Descriptive Information

In describing the eating-place industry, one must draw on general information concerning individual firms in the industry, and as to the industry as a whole. Then detailed statistical data must be used to quantify the generalizations. General information as to how to operate individual firms is readily available. An excellent source is a handbook published by the Department of Commerce entitled "Establishing and Operating a Restaurant" 6/. Publications of the National Restaurant Association and of the various consulting and accounting firms that do business with the industry provide other general information as to the operations of firms within the industry.

The public eating-place industry has an active industrial association, the National Restaurant Association, which publishes a monthly bulletin, many special bulletins, and proceedings of conventions and management courses. The association has sponsored research relating to restaurant operations, and has helped to develop the Restaurant Administration Program of the School of Business of the University of Chicago. A significant contribution of this curriculum is the series of research reports prepared by students working for Master's Degrees in Business Administration under the restaurant program.

To describe the industry as a whole, statistical data are needed as to the number and sales volume of establishments in each of the various sectors of the industry. The Census of Business is a primary source of such data. It supplies relatively adequate information concerning the number and gross sales of street restaurants, hotels, drug-store fountains, and other major public segments of the eating-place industry. On the other hand, census data are not adequate for analyzing sales by street restaurants of merchandise lines in any given city because no analysis is made of sales by all types of smaller eating places (under $100,000 annually in the 1948 data). Nor are they adequate for ascertaining the number and sales of street restaurants within any area by specific type, for example, high-priced cafes, moderate-priced cafes, cafeterias, counter-service cafes, lunch counters, and drive-in establishments. Determination of the characteristics of particular types of firms probably would require extensive local investigation in any area for which a complete analysis is needed. Furthermore, no data relating to sales of meals by drinking places, amusement places, and many other categories are collected for small establishments, although these represent important segments of total sales of meals. Census data contain no information as to eating places operated by nonbusiness establishments, charitable organizations, private clubs, fraternities and sororities, school lunch programs, hospitals, and confinement institutions. Nor are census data available concerning business-sponsored employee lunchrooms and boarding houses.

6/ U. S. Department of Commerce, Industrial (Small Business) Series No. 39, October 1946.

Data available for this study included those from the 1948 Census of Business, with inadequacies as noted above. For Minneapolis and Fairmont, the Bureau of the Census made special tabulations from this Census. The list of food-serving establishments from the Minneapolis Bureau of Environmental Hygiene indicated the many different types of eating places which serve food and formed the basis for choice of random samples of firms to be studied. Information from the classification schedules, reproduced in appendix A, which were completed for two approximately 10-percent random samples in Minneapolis, was used in estimating the division of broader census categories into smaller groups. Sales by several of the smaller categories of firms in the city were estimated, using information from the case studies. In the case of Fairmont, the case studies, plus supplemental data from local-industry people, supplied virtually complete coverage for all establishments.

In general, data available for this study were adequate for rough estimates of the detailed composition of sales of away-from-home meals in Minneapolis and for good estimates of such sales in Fairmont. The statistical reliability of results is limited when using sample data and estimated sales rather than actual sales data. Certain sampling problems are always present in this field because it is unlikely that all small businesses will ever have complete sales data as to their merchandise lines, or that the Bureau of the Census will have resources to collect all of whatever data are available. Although sample analyses of sales of certain merchandise lines by small businesses were made by the Bureau of the Census for some large geographical areas, none was available for Minneapolis.

Marketing Information

Information relating to the marketing agencies that supply eating places with food commodities can come either from surveys of individual eating places or from surveys of wholesalers and other distributors. Some statistical data, such as sales by major commodities by types of wholesaler and wholesaler sales by type of customer, could be obtained for most large cities by special tabulation of data collected in the 1948 Census of Business. Other statistical data, such as sales of meat by packer-truck routes by type of customer and sales of meat to intermediate processors by geographical location, are not collected. Information relating to sales by retail stores to eating places is not available, nor are data available on sales by out-of-town suppliers to local eating places. Descriptive information concerning pricing and selling policies and arrangements that pertain to eating places probably could be obtained only by a special survey of distributors. Another possible source of information is the background data collected for use in formulating regulations of the Office of Price Stabilization as to margins.

The only information collected for the relatively brief analysis of sources of food supplies for eating places, other than that reported by the case-study firms, was obtained by means of (1) a brief inspection of all wholesalers in Minneapolis to evaluate roughly their size and the nature of their operations, (2) interviews with six representatives of wholesale meat firms, and (3) interviews with two wholesale grocers in

Minneapolis. This information is not adequate for a complete analysis of the supply situation that faces eating places, and serves only to describe in general terms pertinent aspects of the wholesale market in Minneapolis.

A matter that invites further study is the extent to which eating places are charged higher prices than other buyers who purchase in wholesale units. There are indications that this is true for both meats and staple groceries. There is a place for a statistical study of prices charged and an inquiry into the customs, limitations, and other reasons that give rise to price differentials to eating places.

Information for description and analysis of buying and management practices of individual firms can be obtained only by direct contact with eating places, either through formal interviews or through informal working arrangements. A wide variety of information for use in analyzing a number of marketing problems can be obtained in this way. Some of the information used in this study is qualitative in nature, such as that dealing with preferences as to quality, packaging forms, and varieties of food. Some is essentially quantitative, such as data relating to the quantities of different forms of food purchased. Knowledge of the actual practices of eating places, which could be particularly useful to producers and distributors, is singularly lacking. The information collected in this study, including that from the interviews and the case-study data concerning detailed quantities and prices of foods purchased, is considered adequate for analyzing the buying and management practices of Minneapolis eating places in their role of marketers of food products. However, the actual content of the interview questions and the extent of the auxiliary descriptive material on purchases (such as brand, variety, vendor, specific weight of contents) from the case studies might well be changed or expanded to meet the broader objectives of a subsequent study.

Analysis of the functions performed by eating places requires extensive information as to how eating places operate and the specific services they render. For this analysis, the case studies of representative eating places supplemented the information regarding operations and services of eating places provided by publications such as "Establishing and Operating a Restaurant" and other books on restaurant management.

The costs that public eating places incur in performing their functions can only be determined by detailed study of extensive financial data. As a first step, the gross marketing charges imposed by eating places for performing their functions can be derived from food-cost percentages, as the complementary percentages represent the gross mark-up over cost. However, comprehensive data concerning food costs are not collected regularly by anyone, although case-study data appear sometimes in trade publications. From time to time, the National Restaurant Association collects cost data from members, but these represent only the select membership of the association and often are not published.

Filing of food-cost percentages for 1949 or for the year July 1, 1949, to June 30, 1950, was required of all eating places by the Office of Price Stabilization. These data should be an excellent source of material for further research. They are probably complete because they are the primary basis for price-control regulation. As these data were not filed by restaurants until April 30, 1951, no tabulations were available for use in this study.

Food-cost percentages for 1948 were obtained from only the 20 Minneapolis eating places which were the case studies. In some instances, changes in management necessitated relying on estimates. Accordingly, the results of this study are indicative rather than conclusive. To obtain conclusive results from a statistical point of view, it would probably be necessary to determine food costs for every eating place with sales of more than, say, $100,000 a year, and for either a 10-percent sample or 50 observations, whichever is larger, of the smaller establishments.

Data relating to food costs of establishments that represent more than half of the total sales of meals were obtained in Fairmont and satisfactory estimates could be made of food costs in the remaining establishments.

Division of the gross marketing charges of eating places into labor costs and a number of other cost categories is a further step in the direction of a detailed analysis of the marketing costs of eating places. In most instances in which food-cost percentages have been published, labor-cost percentages and various other costs in typical accounting classifications are also available. The Office of Price Stabilization, however, is understood to have collected only data relating to food costs. In this study of Minneapolis and Fairmont eating places, no attempt was made to collect cost ratios beyond food and labor costs in order to avoid possible antagonism of operators who regard profit figures as confidential information. However, published data from these sources, although limited, indicate roughly the composition of the costs of marketing food through eating places. Many additional cost data would be necessary to make estimates of the composition of eating-place costs for any particular area.

A thoroughgoing cost analysis of the marketing functions of eating places would require time studies to form the basis for allocating payroll costs to the various services performed by eating places, such as food purchasing, food preparation, cooking, serving, dishwashing, other housekeeping, accounting, housing, management, and other services. Such cost estimates could be related to the type of service provided, such as counter and table service. They would be useful in analyzing relative efficiencies of the different types of service. These data also would be useful in comparing costs of eating places with costs of retail food stores. However, only fragmentary information of this type is available.

Comments in this study on efficiency of eating places as marketers of food products consist essentially of a description of the peculiar problems of eating-place operations in terms of general efficiency. The degree of efficiency of such firms varies somewhat according to the standpoint from which it is viewed, whether it be that of customers, operators, or food producers. Moreover, it is doubly difficult to measure the marketing efficiency of eating places because of the existence of a wide variety of services, atmosphere, and other factors which consumers demand. The only data used in this section were case studies on comparative costs of several types of eating places.

Information on Food Purchases and Consumption

Conclusive data as to patterns of food purchases by eating places for any given area would require census data as to sales, a large number of case studies to establish patterns by types, and additional information concerning food costs for use in applying case-study results to the sales data. The data available for this study included fairly complete census sales data. Data relating to the patterns of food costs and purchases, however, were available only from the 20 eating places included in the case studies, of 1,285 establishments in Minneapolis where prepared meals could be bought. However, of these firms 237, or 18 percent, do 59 percent of the business. The estimates of purchases derived in this study, although not precise nor completely reliable in the statistical sense, are believed to be the results of an appropriate method of approaching the problem and to give a good picture of the total eating-place industry in the two cities. Estimates of purchases made by eating places in terms of three food groups, however, are necessarily rough approximations because of the wide variations within purchase patterns. Greater stratification in this respect and more observations in each stratum of firms in the industry are essential to achieve better statistical reliability.

Analysis of the quantitative rates of food consumption for people who eat in restaurants of all types is a completely uncharted area of food-consumption analysis. The case studies in this project included commercial restaurants, both street restaurants and auxiliary restaurants such as those in department stores, hotels, and drug stores. Two methods were used to measure the rates of food consumption in such establishments. The first method consisted of ascertaining total physical disappearance of food from each eating place during a 2-week or a 1-month period and dividing this total by the total number of customers served. The second method involved adjustments to exclude between-meal snacks from the customer count as well as further adjustments to achieve greater comparability among establishments, as described in chapter 8. Results are based on only a few case studies for relatively short periods of time, however, and therefore their statistical reliability is likely to be rather low. Improvements can be made by using more studies during longer periods of time in establishments in which detailed analyses can be made of meal checks by time of day and by size. However, despite their limited coverage, both sets of results of this exploratory study indicate significant differences between patterns of food consumption at home and those away from home which apparently explain some of the observed discrepancies between data relating to family food purchases and national averages of per capita consumption.

An additional problem in this study was how to determine the proportion of the total food supply in the two cities, and also in the United States, which was distributed by eating places. Ideally, we should have data that show the total physical quantities of major foods sold by retail stores, by eating places, and by all other sellers to consumers. Total data of this kind have never been assembled. Perhaps it may be possible to make estimates for specified areas on the basis of sample surveys of major distributors, with careful stratification, and some case studies, but such a survey was not possible within the resources of this study. Approximations which are adequate for most purposes can be arrived at by working with value data, and adjusting for differences in price levels. Such approximations of the value of food sold through retail stores and other channels directly to consumers and by all types of eating places are made in this study, but they are subject to serious limitations of statistical reliability.

Finally, the necessarily limited scope of this pilot study and the statistical restrictions of the case-study approach should be kept in mind in reviewing the analyses based on the original data collected in the course of the study and reported in this publication. Findings indicate the role of public eating places as marketing agencies in Minneapolis and Fairmont, Minn., but they are not conclusive for even these cities (particularly the former) and much less so for other areas. Many more firms will need to be studied in detail and many other cities covered before broad generalizations can be made as to management practices, costs, and patterns of food purchases. Actual measures of statistical reliability of the estimates of this study could not be made in most instances because of nonrandom selection and too few observations to obtain adequate measures of the variations of the observations. Throughout the report these statistical limitations are indicated. However, in every possible instance, maximum use was made of strata within the industry and the most appropriate case studies were then related to the available strata in order to develop as complete a picture as possible of the eating-place industries in the two cities.

CHAPTER 2.- DESCRIPTION OF THE EATING-PLACE INDUSTRY

Introduction

The study upon which this report is based was concerned with the area of food marketing for consumption away from home as opposed to the marketing of food for home consumption. Although many types of establishments sell prepared food for on-premise consumption, as described below, the case studies and other original data in this report deal almost entirely with public eating places, most of which are operated commercially for profit. This restriction followed from the intensive, rather than extensive character of the study. However, the operation of public eating places is generally representative of all eating places, in that all eating places are quantity kitchens which serve prepared meals and perform related production and management functions. The chief differences between public commercial eating places such as cafes, cafeterias, and hotels and such private eating places as clubs, fraternities, hospitals, and schools are those that arise from degree of emphasis on profit and prices and from less variation in the number of persons served in many private eating places.

The following list indicates the wide variety of types of eating places in which prepared meals are served away from home.

Airplanes
Amusement places
Boarding houses and clubs
Cafes
Cafeterias
Caterers
College cafeterias and lunchrooms
Department and variety store restaurants
Dormitories
Drinking places of all types
Drug-store restaurants
Employee lunchrooms
Fraternities and sororities
Hospitals
Hotels
In-plant feeding facilities
Jails and other confinement institutions
Lunch counters
Private clubs
Railroad dining cars
School lunchrooms
Steamships
YMCA or YWCA restaurants which invite the public

Any type of away-from-home establishment that serves cooked meals or lunches to people outside the family household may be described as an eating place. This includes a wide variety of quantity feeding operations, which may be divided into three general categories--street restaurants, auxiliary restaurants, and private eating facilities. Street restaurants are public eating places whose primary business is serving cooked meals and lunches, generally, on the premises. These include table, counter, or combination service cafes, cafeterias, lunch counters, refreshment stands, caterers, and commercial in-plant feeding operations. This definition of street restaurants is comparable to the Bureau of the Census category of eating places. 7/ Auxiliary restaurants are public eating

---

7/ See appendix C for census definition.

facilities which are combined with other business operations under a single roof, and in which the sale of meals is not the primary business. Examples include hotel dining rooms, department and variety store restaurants, drug-store fountain luncheonettes, railroad dining cars, and dining rooms of various types of clubs which are open to the public. Private eating facilities are those away-from-home eating operations that are not generally open to the public and which are specifically set up to serve a particular group of people. Most private facilities other than clubs are called institutional feeding operations. Institutions such as hospitals and jails and the eating facilities of airplanes and other transport agencies which supply meals incidentally with other services might well be included here.

The distinction between street restaurants and the other two types of restaurants is important because many of the latter are not completely independent financially. For example, building overhead may not be fully or accurately charged to the eating facility. Employee cafeterias are generally subsidized to some extent by the sponsor. Eating facilities in stores of various kinds may be used to draw customers.

In this study it was desirable to consider several subgroups within the class of street restaurants because they differ as to the ratio of purchases of food to sales of meals and in the distribution of food purchases among the various types of foods. The following subgroups of street restaurants were used: medium-priced cafes (generally having both counter and table service), high-priced cafes (having primarily table service), cafeterias, short-order lunch counters, and fountain luncheonettes.

The National Eating-Place Industry

Total sales of meals and beverages in 1948 by all types of public and private eating places (including food furnished patrons) have been estimated at about 15 billion dollars [8] compared with about 5 billion dollars in 1939. The importance of the eating-place industry is highlighted by the fact that it handled more than 10 percent of the total sales volume of all retail trades in 1948, as reported by the Census of Business (table 1), and more than one-fifth of the total dollar volume of food sales. [8]

The Census of Business shows that establishments commonly described as "street restaurants" sold 6.4 billion dollars worth of meals and beverages in 1948, somewhat less than half of the industry total. This category includes restaurants, cafeterias, lunch counters, and refreshment stands. The significance of these firms in the national economy may be judged also from the facts that they employed nearly a million people in 1948

---

[8] Based on data in the Census of Business, supplemented by estimates of the National Income Division given in the National Income Supplement to the Survey of Current Business, July 1951. See tables 34 and 37 and chapter 9.

Table 1.- Selected Census data on United States retail businesses, by type of establishment, 1939 and 1948 1/

Type of establishment	Number of establishments		Total sales			Pay roll		Total number of paid employees Nov.15	
	1939	1948	1939	1948	1948 as a percentage of 1939 2/	1939	1948	1939	1948
	Thous.	Thous.	Bil. dol.	Bil. dol.	Percent	Bil.dol.	Bil.dol.	Thous.	Thous.
Restaurants, cafeterias, caterers	3/ 99	131	3/1.8	5.3	300	3/0.36	1.17	3/545	828
Lunch counters, refreshment stands	71	63	.4	1.2	315	.04	.17	63	140
Total street restaurants	3/170	194	3/2.2	6.5	303	3/ .4	1.3	3/608	968
Drinking places	136	152	1.4	4.2	304	.2	.6	222	369
Food stores	4/560	504	4/10.2	31.0	305	4/ .8	1.9	4/815	1,006
Department, dry goods, variety stores	50	53	5.7	16.0	282	.8	2.3	966	1,351
Drug stores with fountains	39	40	1.2	3.0	253	.1	.4	159	233
Drug stores without fountains	18	16	.4	1.0	270	.03	.10	34	49
Hotels 5/	28	30	.9	2.2	252	243	660	330	398
United States total, retail trades 6/	1,770	1,770	42	131	310	5	14	4,822	6,918

1/ From Bureau of the Census, U. S. Census of Business, 1948: Bulletins No. 1-R-0 and 2-S-10
2/ Based on unrounded data.
3/ Excludes caterers.
4/ Includes caterers.
5/ Data compiled from U. S. Census of Business, 1948, Service Trades, Hotels, Bulletin No. 2-S-10.
6/ Excludes wholesale and service trades.

and that their payrolls totaled 1.3 billion dollars. The number of employees in food stores was only slightly larger. Actually, the restaurants' payrolls are somewhat understated because employees receive part of their returns in the form of greatly reduced prices for their own food and as tips.

The number of street restaurants in 1948 increased by 14 percent over the number in 1939, whereas the number of food stores in 1948 decreased by 10 percent over the number in 1939 (table 1). This indicates a trend toward larger volume food stores (for example, supermarkets), whereas street restaurants are less likely to be concentrated in large units. The relative ease of entry into the restaurant business, the desire of many veterans to start their own businesses following World War II, and the great demand for restaurant meals during the war may have accounted for much of the increase in the number of eating places.

The number of lunch counters and refreshment stands was lower in 1948 than in 1939, while the number of restaurants and cafeterias was higher in 1948. The census data also show a moderate increase in the number of drug stores with fountains in 1948 compared to 1939, while the number of drug stores without fountains decreased.

The importance of public eating places as markets for food and as distributors is indicated by their total sales of meals and fountain items amounting to $8.1 billion in 1948 (table 2). (See chapter 9 for details on computations.) Street restaurants accounted for $5.8 billion of the 1948 total for food items. In addition to sales of prepared food by public eating places, substantial amounts of food are served patrons by clubs, industrial lunch rooms, schools, and school fraternities, boarding houses, civilian institutions of all kinds, and transportation agencies (other than railroad dining cars). The sales value of such food in 1948 might have been as much as $2.4 billion, excluding food furnished employees. Although boarding houses and boarding clubs probably represent a fairly significant market for food, no data have been found to serve as a basis for estimating either their purchases of food or their sales. As an outright guess, they were estimated to be about equal to hotel sales of food in 1939 and 1948.

Some public eating places and many private establishments serve meals without charge to their employees. Also, food consumed by proprietors and their families must be taken into account. The total value of food used for these two purposes apparently ran about one billion dollars for 1948.

A significant indicator of the economic importance of the public eating-place industry is the quantity of food which it buys and processes for sale as meals. No direct measure of this quantity is available, either for the country as a whole or for particular areas, but it is possible to estimate its relative magnitude. This process is described in detail in chapter 9 but at this point the estimate can be cited. In 1948 about 11 percent of the total food supply moved through public eating places and 16 percent through all types of eating places, including

Table 2.- Estimated total meal and fountain sales of all types of public and private eating places, United States, 1948

Type of establishment		Sales	Percentage of total
		Million dollars	Percent
Public eating places			
Street restaurants			
Restaurants, cafeterias, lunchrooms, etc.		4,810	50.7
Lunch counters and refreshment stands		916	9.7
Caterers		59	.6
Subtotal, street restaurants	1/	5,785	61.0
Hotels	2/	610	6.4
Drinking places	1/	668	7.0
Dining and buffet cars	3/	44	.5
Drug and proprietary store fountains	4/	600	6.3
Confectionery, grocery, delicatessen stores	5/	103	1.1
Department and variety stores	6/	220	2.3
Cigar stores and stands	7/	66	.7
News dealers and news stands	7/	24	.3
Amusement places	8/	20	.2
Subtotal, public eating places		8,140	85.8
Private eating places selling meals			
Institutions, clubs, industrial lunchrooms	9/	450	4.7
Schools and school fraternities	10/	300	3.2
Boarding houses	11/	600	6.3
Subtotal, private eating places		1,350	14.2
Total sales of meals and fountain items		9,490	100.0
Institutions and transportation agencies, meals supplied to patients or patrons	12/	1,000	---

---

1/ Includes food sold by street restaurants for off-premise consumption and includes estimates for non-analyzed sales. Excludes alcoholic beverages and non-food commodities. Based on Census of Business data, Census Bulletin No. 2-R-17, table 17A.

2/ Reported in table 10H, Census Bulletin No. 2-S-10, plus 10 percent to cover meals not reported separately.

3/ Rough estimate of food sales portion of sales of meals and beverages as estimated in National Income Supplement to Survey of Current Business, July 1951.

4/ Table 23A, Census Series BC-3-R-23.

5/ Table 16A, Census Series BC-3-R-16.

6/ Table 18A, Census Series BC-3-R-18.

7/ Table 24A, Census Bulletin 2-R-24.

8/ Rough estimate.

9/ Estimate of food and beverage sales from National Income Supplement less 10 percent to exclude alcoholic beverages. Does not include food furnished by hospitals, etc.

10/ Estimate of food and beverages from National Income Supplement less 5 percent to exclude alcoholic beverages.

11/ Rough approximation by collaborating author of this report, at about same amount as hotel meal sales, as maximum.

12/ Rough approximation based on institutional population, some information on rates of food purchases by institutions, and some industry data for transportation agencies.

food served by institutions and transportation agencies. This percentage differs significantly from the ratio of value of meals or meals and beverages to total sales of food at all levels because it is based on calculations in which all food was valued at approximately retail food store prices, as described in chapter 9. But relative quantities can be judged only by excluding the additional dollar value of services that are sold with meals. Costs and margins of operating firms which handle this proportion of the civilian food supply are of major importance to food producers, food distributors, the consuming public, and to many public and private agencies.

Minneapolis and Its "Eating-Place" Industry

Minneapolis, with a 1950 population of 517,277, is the largest city in Minnesota. As part of the Minneapolis-St. Paul metropolitan area, it is the major merchandise distribution and financial center for Minnesota, North Dakota, South Dakota, and parts of Wisconsin, Iowa, and Montana. The city also has an extensive manufacturing industry. Eating places in Minneapolis draw business from the city proper, the suburban areas, and from the sizable temporary population of travelers in the area. Travelers undoubtedly constitute a significant part of the patronage of high-priced cafes, drinking places, and hotels.

The 1948 Census of Business gives some indication of the size of the eating-place industry in Minneapolis. It lists 612 establishments classified as eating places, with sales of 33 million dollars, and 426 drinking places with sales of 26 million dollars. These include commercial firms that specialize in serving meals and beverages. Certain types of business establishments primarily engaged in other activities also served prepared meals. These include department stores, variety stores, drugstores with fountains, and hotels. A special tabulation of sales of eating places was made by the Bureau of the Census and is given in table 3.

A third segment of the industry consists of private eating places. Relatively few data dealing with such operations have been collected. In order to round out the picture of the whole industry for Minneapolis, rough estimates were made on the basis of observation of the local situation. The number of places in certain categories was checked with the classified section of the telephone directory and with restaurant people. Their sales were approximated with the assistance of informed individuals in such businesses, using all available data.

These estimates of number of firms and their sales of meals and related prepared food, assembled in table 4, indicate that the eating-place industry in Minneapolis sold about 55 million dollars of meals in 1948, and that the public segment of the industry handled about 80 percent of the total. Although many types of eating places serve prepared meals, more than half of the food eaten away from home is served by the regular street restaurants which primarily engage in meal serving as a business. These street restaurants as a group are five times more important than any other single group of eating places. About 49 percent of the food served away from home in Minneapolis is served by commercial and private

Table 3.- Sales of meals and other selected items, Minneapolis, 1948 1/

Type of business and merchandise line	Sales of merchandise: Meals and related items	Sales of merchandise: Meals and related items as percent of analyzed total	Stores reporting merchandise line: Stores	Stores reporting merchandise line: Total sales
	1,000 dollars	Percent	Number	1,000 dollars
Eating places - total	32,871		612	---
Large stores and multiunits	19,680		135	---
Analyzed merchandise line sales	19,070	100.0	131	---
Meals	14,678	77.0	2/ 123	18,353
Beer, wine, liquor	2,400	12.6	20	6,677
Fountain, soft drinks	645	3.4	16	1,906
Cigars, cigarettes, tobacco	342	1.8	48	9,540
Candy, nuts, confectionery	185	1.0	22	3,988
Outside catering	2/	3/	9	4/
Groceries, packaged liquor, etc.	2/	3/	2	4/
Other sales	820	4.3	---	---
Not analyzed	610		4	---
Small single-unit stores	13,191		477	---
Drinking places - total	25,835		426	---
Large stores and multiunits	12,849		88	---
Analyzed merchandise line sales	12,849	100.0	88	---
Beer, wine, liquor	10,192	79.3	88	12,849
Meals	2,266	17.6	36	6,985
Fountain, soft drinks	86	.7	15	1,505
Cigars, cigarettes, tobacco	232	1.8	47	7,042
Candy, nuts, confectionery	21	.2	16	1,645
Packaged liquors, grocery, etc.	3/	---	1	4/
Other sales	52	.4	---	---
Small single-unit stores	12,986		338	---
Department stores - total	147,462	100.0	7	---
Restaurant and fountain	2,272	1.5	5	102,634
Candy, nuts, confectionery, grocery	1,661	1.1	6	146,227
Variety stores - total	10,118		73	---
Large stores and multiunits	9,353	100.0	30	---
Fountain and meals	956	10.2	7	7,448
Candy, nuts, confectionery	690	7.4	27	9,240
Small single-unit stores	765		43	---
Drug stores with fountains - total	21,968		211	---
Large stores and multiunits	14,812		74	---
Analyzed merchandise line sales	13,979	100.0	71	---
Fountain and meals	3,290	23.5	71	13,979
Tobacco, newstand, confectionery	3,362	24.1	64	13,148
Not analyzed	833	---	3	---
Small single-unit stores	7,156	---	137	---
Hotels - total	14,136	100.0	106	---
Room rentals and sale of meals	11,897	84.2		---
Alcoholic beverages	1,454	10.3		
Space and concession rentals	277	2.0		
Other	508	3.6		
Analyzed sales	10,354	100.0	15	---
Room rentals	4,874	47.1		
Meal sales	3,464	33.4		
Alcoholic beverages	1,388	13.4		
Space and concession rentals	160	1.5		
Other	468	4.5		
Not analyzed	3,782	---	91	---

1/ From Census of Retail Trade, special tabulation by Bureau of the Census.
2/ There evidently are eight caterers who serve no meals on the premises.
3/ Included in "other" sales.
4/ Withheld to avoid disclosure.

Table 4.- Number, type, and estimated sales of meals in Minneapolis eating places, 1948

Type of establishment	Establishments	Estimated sales of meals: Amount	Estimated sales of meals: Percentage of total meal sales	Estimated sales of meals: Percentage of meal sales by public commercial places
	Number	1,000 dollars	Percent	Percent
Commercial public eating places [1]				
Eating places	612	28,116	51.3	64.3
Drinking places	[2]175	3,472	6.3	7.9
Department stores	5	2,272	4.1	5.2
Variety stores	7	956	1.8	2.2
Drug stores with fountain	211	5,171	9.5	11.8
Hotels	15	3,464	6.3	7.9
Bowling alleys	[3] 15	[4] 300	.6	.7
Total	1,040	43,751	79.9	100.0
Noncommercial public eating places (YWCA, etc.)	[4] 3	[4] 300	.5	
Private eating places				
Employee lunchrooms	[3] 52	[4] 520	1.0	
School lunch programs	---	570	1.0	
University of Minnesota dormitories and restaurants	6	1,350	2.5	
Other schools and colleges	[4] 7	[4] 300	.5	
Fraternities and sororities	[3] 65	[3] 684	1.3	
Boarding houses	[3] 75	[4] 840	1.5	
Private clubs	[3] 21	[3] 2,800	5.1	
Hospitals	[5] 16	[6] 3,660	6.7	
Total	242	10,724	19.6	
Total for all establishments	[2]1,285	54,775	100.0	

---

[1] Estimates derived from table 3. Sales not analyzed by commodity line were divided up on the basis of comparable data reported by other firms, with minor adjustments on the basis of actual observation of operations of firms in Minneapolis and information obtained from the random samples of establishments serving food.

[2] Only 175 of the 426 drinking places in the city are considered to be meal-serving establishments.

[3] Based on sample data.

[4] Rough estimate based only on local observation.

[5] These 16 are major hospitals, not including the very large veterans' hospital just outside the city limits. No data were available as to food operations of the 17 small hospitals and rest homes in the city.

[6] Hospitals do not sell meals at menu prices. This estimate is based on sample-purchase data and arbitrarily assumes a 50 percent "food cost", or sales equal to twice the food cost.

establishments which do not depend primarily upon the sale of meals for profit. Some of these may use meal serving as an attraction to lead customers into their establishments. These are drinking places, department and variety stores, and drug stores. Others, such as employee lunchrooms and school lunchrooms, may serve meals on a partial subsidy basis. In all cases in which the serving of meals is not the main source of income, price policy is likely to be affected by considerations other than cost.

Analysis of the data in table 4 and other supplementary data indicates that 194 establishments, or 19 percent of the 1,040 commercial establishments that serve meals, accounted for about 56 percent of meal sales in 1948, and that 237 establishments, 18 percent of the 1,285 establishments of all types serving meals in 1948, accounted for about 59 percent of all sales of meals.

Fairmont and Its "Eating-Place" Industry

Fairmont is the county seat of Martin County in south central Minnesota; it has a population of 8,175. The county is a relatively prosperous, diversified farming area. A substantial part of Fairmont's income is derived from business with the surrounding agricultural community. The city also has several nonagricultural industries.

The 1948 Census of Business contains the following general business data for Fairmont:

	Number of stores	Sales
Eating and drinking places	26	$ 885,000
Food stores	25	2,610,000
All business groups	160	16,689,000

Specific estimates of Fairmont's entire eating-place industry were made after completion of the case studies in 13 establishments. The total of such estimated sales differed from the comparable census total by only 2 percent and the estimates were used directly for all analyses. Estimates of sales of meals do not include three large and several small taverns in the lake area south of the city. These taverns probably sell meals amounting to $100,000 or $150,000 in a year, of which possibly half is to Fairmont people.

Total sales of meals were estimated at $730,000 for 1948. The proportion of the total sales realized by the 22 street restaurants, 76 percent, is higher in Fairmont than in Minneapolis. This may be associated with exclusion of the lakeside taverns from city data, and it indicates less emphasis on hotels, department stores, drug stores, and drinking places as meal-serving establishments. The three hotels in Fairmont probably accounted for slightly more than 10 percent of the total, and the remaining 14 percent of meals were sold by the variety store, three drinking places, one drug store, two grocery stores, and a bowling alley.

Comparisons of the Eating-Place Industry in the Two Selected Cities and in the United States

Differences between the Minneapolis and Fairmont restaurant industries indicate the variations to be expected in the restaurant industries of other cities and towns (table 5). The differences in the average size of firms, the types of establishments, and per capita sales of meals between the two cities apparently are significant. Average annual sales per restaurant in Minneapolis were considerably higher than in Fairmont or for the United States, both in full-line firms and in lunch-counter types of operations. Supplemental information indicates that smaller average sales in Fairmont arise as a result of both smaller sales in popular priced places and the absence of very large establishments. In general, eating places outside cities apparently have smaller average annual sales than eating places in areas of concentrated population.

The lunch-counter group of firms in Minneapolis had higher average annual sales than like firms in the country as a whole. This may arise in part from the popularity in cities of short-order counters that are open 24 hours a day and that cater to the substantial number of odd-hour employees. The chief factor is probably that a higher proportion of the working population eats lunch away from home. Lunch-counter firms in Fairmont are apparently smaller than those in either Minneapolis or the country as a whole.

An additional comparison is the number of firms in relation to the population. Here Fairmont seemed strikingly different, with about twice as many street restaurants per 1,000 population as Minneapolis or the country as a whole. This is probably why several Fairmont restaurant men said that there were far too many eating places in Fairmont to enable most of them to attain enough volume to operate efficiently. However, Fairmont had fewer public eating places of types other than street restaurants. The rate of expenditure for meals in street restaurants in Fairmont was appreciably higher than in either Minneapolis or the country as a whole. But this rate was calculated from the city population only and it is greatly influenced by the relatively small number of nonstreet restaurants. Sales of meals by all types of public eating places in relation to population averaged somewhat higher in Minneapolis than in Fairmont, but the national average was considerably lower than that of Fairmont. This might be expected from the fact that nonurban areas have few public eating places. The rate of sales in all eating places in relation to the population is apparently influenced by such factors as the proportion of nonresident people who eat and drink in the city, the average income of the resident and nonresident population, and the size of the city. Fairmont is on two main highways; it serves a large prosperous agricultural community. Therefore, its high rate of sales may be due to the favorable influence of the two factors. In considering the proportion of nonresident people who patronize eating places in cities, at least two important types--travelers of all kinds and nearby residents--eat in the city with some regularity. The proportions of travelers in Fairmont and Minneapolis are not easily determined but they may conceivably be about the same, as both cities are distribution centers for surrounding areas. Nearby residents who eat in the city include suburban residents of Minneapolis who work in Minneapolis and workers and farmers from Martin County who occasionally or regularly eat in Fairmont.

Table 5.- Street restaurants and other public commercial eating places: Number of firms, total and average sales of meals and beverages in Minneapolis, Fairmont, and the United States, 1948

Item	Unit	Restaurant, cafeteria, caterers. ("Full line" street restaurants)			Lunch counters and refreshment stands. ("Short order" street restaurants)			Total		
		Minneapolis	Fairmont	United States	Minneapolis	Fairmont	United States	Minneapolis	Fairmont	United States
Street restaurants:										
Number of establishments	Number	417	14	140,112	195	8	53,999	612	22	194,111
Total annual sales, meals and beverages	1,000 dollars	27,285	1/ 692	2/ 5,388,000	5,586	1/ 83	2/ 943,000	32,871	1/ 775	2/ 6,331,000
Average sales per establishment	Dollars	65,400	49,400	38,500	28,600	10,400	17,500	53,700	35,200	32,600
Average number of establishments per 1,000 population 3/	Number	.81	1.71	.96	.38	1.00	.37	1.18	2.69	1.33
Average total sales per capita	Dollars	52.70	84.70	36.90	10.80	10.20	6.50	63.50	94.80	43.40
All public eating places:										
Purchased meals, beverages and related sales										
Total	1,000 dollars							4/ 79,657	5/ 1,023	6/ 12,500,000
Per capita	Dollars							154.00	125.10	85.60

1/ Direct estimate from sample data.

2/ Including small amount of sales for off-premise consumption.

3/ Based on 1950 population for Minneapolis (517,277) and Fairmont (8,175), 1948 civilian population for United States, 148,000,000.

4/ Estimated from data in table 3 using information on sales from random samples of Minneapolis firms and reported patterns of analyzed sales to derive total sales including meals, fountain items, alcoholic beverages, tobacco, confectionery, grocery items.

5/ Estimated from sample data and reconciled with Census of Business data for Fairmont.

6/ Total of $8.1 billion for meals and related food items and estimate of $4.4 billion sales of alcoholic beverages, based on Census data.

Bureau of the Census data except where noted.

CHAPTER 3.- MARKETING AGENCIES THAT SUPPLY FOOD TO EATING PLACES IN MINNEAPOLIS AND FAIRMONT

Information as to the sources of food supplies for eating places is useful in analyzing the flow of food through the prepared-meal channel. The extent to which food is processed before reaching eating places and the cost of this processing affect both the functions that must be performed by eating places and the extent and distribution of their costs. Prices paid by eating places in relation to the form and quantity of their purchases also affect the demand for prepared meals, and possibly the total effective demand for food. The following discussion of the marketing agencies that supply Minneapolis and Fairmont is not to be regarded as a final evaluation of the situation in these communities, but as indicative of the agencies concerned and of some of the marketing problems involved.

Minneapolis

Minneapolis, as a major distributing center for Minnesota and parts of nearby States, would be expected to have good sources of food for eating places. Few complaints have been heard from Minneapolis restaurateurs in this connection. The city is large enough to maintain a number of specialized supply houses for the eating-place industry, in addition to a wide variety of wholesale establishments and some agencies that are allied with producers.

Meat.- Minneapolis eating places obtained meats from packers who sell direct and deliver by truck from nearby plants in St. Paul, South St. Paul, and Newport; packer branch houses that sell from stock; restaurant and hotel purveyors; out-of-town packers and purveyors; meat markets with wholesale, retail, and sometimes frozen-food locker departments; and retail meat markets. Direct sales by packers are made only to eating places large enough to utilize carcasses, quarters, and wholesale cuts. Such eating places must have meat cutters on their staffs. This source is used by a number of high-priced cafes and hotels that specialize in high-quality meats.

Packer branch houses sell from stocks of fresh meat on hand; they sell limited quantities of carcasses and wholesale cuts to eating places. Some branch houses have limited facilities to bone and cut meat; others avoid processing activities and act only as wholesalers. Apparently no branch house does enough processing to offer pork chops cut 5 to the pound, or beef in 8-pound boned-rolled-tied roasts. At least one and possibly other branches restrict sales to quantities of 100 pounds or more. These limitations reduce sales by branch houses to eating places. Availability of meat for personal inspection makes branch-house buying appealing to many buyers, although personal inspection is less common now than in the past. Sales may be on either a delivered or picked-up basis, though delivery is more common.

Although statistical data are not available, apparently a relatively small part of the meats purchased by eating places in Minneapolis is bought directly from packers or branch houses. Even those quantities are often priced somewhat higher than sales to purveyors and retailers because of the smaller quantities, frequent deliveries, and higher level of competitive prices charged by other suppliers. Strictly wholesale prices are quoted only to retail meat dealers and purveyors.

Retail meat-dealer and restaurant-purveyor associations have asserted that the eating-place market belongs to these dealers and purveyors, and that they cannot be expected to compete with their own suppliers, the packers, in selling to that market. In part, branch houses abide by this limitation, to the extent of not actively soliciting the eating-place business.

Restaurant and hotel meat purveyors, that is, firms that specialize in sales of provisions to restaurants and hotels, are usually well equipped to process meat to any extent desired by eating places. This includes boning, rolling, and tying roasts of desired size, cutting chops and steaks to the desired thickness, preparing hamburger, aging meats, and generally providing the pan-ready cuts that many eating places use. Purveyors buy their meats in wholesale quantities by direct truck delivery from packers in South St. Paul, from the local branch houses, and by direct shipment from packers in other cities. One large purveyor assembles large quantities of U. S. Choice and U. S. Prime meats, particularly loins, from several major packing centers in order to supply hotels and steakhouses in Minneapolis with high-quality steaks and roasts. Others may do this also. Purveyors usually provide prompt delivery as service to eating places. Purveyor prices have not been systematically studied. Prices for processed cuts in small quantities were reported by several restaurateurs as equal to retail chain-store prices, but delivery and standardized processing are provided by purveyors but usually not by retail chain stores.

Many large meat markets sell both at retail and at semi-wholesale. They cater to eating places; and they provide almost the same services as straight purveyors. These markets are well adapted to supply sizable quantities of particular items such as hamburger, pork chops, and tenderized "minute" steaks to the many short-order eating places in the city. Markets with retail trade can dispose of the cuts not wanted by the short-order eating places. Two such markets advertise as retail-wholesale meat dealers catering to eating places. Several others are known to supply restaurants regularly with meats at special prices. No doubt many more of the approximately 280 meat retailers listed in the classified section do likewise.

From interviews with a random sample of restaurant operators which are discussed in the following chapter (and given in detail in appendix B), apparently about two-thirds of the eating places in Minneapolis bought meat through restaurant-supply houses and wholesale meat dealers.

About a third of the restaurateurs bought meat at retail stores, and about two-thirds of such buyers received special prices. In terms of volume of business, about 82 percent of the meat came from restaurant-supply houses and meat wholesalers and 17 percent from retailers. Nearly all the restaurateurs bought meat from one or a few suppliers regularly.

Fish.- Fish are supplied to eating places primarily by a large national fish and frozen-food house, to a lesser extent by several smaller fish and frozen-food houses, and to a limited extent by direct shipment from coastal fish houses and by retail meat dealers. Large whole fish, such as halibut and salmon, are available in addition to smaller bulk fish and the packaged types, including fillets.

Poultry.- Supplies of poultry are primarily of local origin as is the case with meat. Two-thirds of the eating places that bought poultry obtained their supplies from wholesale dealers. In terms of volume, restaurants that buy poultry from restaurant-supply houses realized about 20 percent of sales, those that buy from wholesale meat dealers 28 percent, from produce dealers 27 percent, from retail stores 10 percent, and from local farm producers 6 percent. Around 23 percent of the eating places, the smaller ones that represent 9 percent of total sales, did not buy poultry. In contrast, more than half of the eggs were bought from local producers or vendors representing them.

Dairy Products.- Milk and cream are delivered by the milk companies at a slight discount (1 cent a quart by some companies) to eating places from both house-to-house trucks and wholesale-route trucks. Considerable savings are possible through the use of bulk milk dispensers, and many restaurants now use such dispensers. Homogenized milk in 5-gallon bulk dispenser containers sold for 68 cents a gallon at the time of the study, while milk in half-pint containers at 4-3/4 cents each amounted to 76 cents a gallon. Plans for purchasing the dispensers from savings are available through some milk dealers. Ice cream was bought from both ice cream manufacturers and general milk processors. Butter was usually bought with milk and cream, and cheese was obtained both from milk processors and direct from one or more cheese-truck sales routes.

Fresh Fruits and Vegetables.- Minneapolis eating places buy their fresh fruits and vegetables from wholesale produce houses that specialize in such commodities, grocery wholesalers, branch houses of wholesale firms located throughout the city that specialize in "cash and carry" orders, restaurant-supply houses, and retail food stores. Fresh fruit and vegetable houses, some of which buy in carload lots directly from producing areas, supply both eating places and retail stores. One large handler regularly quotes a straight wholesale price on cases and a somewhat higher price on less-than-case lots. Head lettuce, for example, was quoted one day in April at $5.00 per 5-dozen-head crate, and $1.25 per 1-dozen-head bag, or $5.75 per case equivalent. These differentials provide definite savings to restaurants that are large enough to use crates, and significantly, this handler supplies a major part of the eating-place market. Delivery service is included in prices of the 42 Minneapolis fruit and vegetable whoesalers listed in the classified directory, of which about 10 might be classed as major houses.

Two large grocery wholesalers, in particular, and others to a lesser extent, supply fresh fruits and vegetables to eating places as well as to retail food stores. One of these firms sells directly to a considerable number of eating places. It is one of the more important suppliers of fresh produce. The other firm operates through its branches, as discussed below.

A few restaurant supply houses sell either crates or parts of crates. These houses also handle staple groceries and sometimes restaurant equipment, they sell primarily to small or medium-sized eating places, and they supply only a small part of the total eating-place market. Delivery service is included in the price.

Cash-and-carry wholesale branches of wholesale grocery houses supply another small part of the eating-place market. There are now 10 such branches in Minneapolis which are patronized by relatively small restaurateurs and grocery retailers. Purchases in the fresh line may be in either crate or less-than-crate lots in these stores.

Retail food stores supply the remainder--which is small--of the fresh fruits and vegetables to eating places. Small eating places generally, and particularly short-order grills, buy such small quantities of fresh produce that only retailers or small cash-and-carry wholesalers are interested in selling to them.

Almost all eating places buy potatoes in 100-pound bags from their suppliers of fresh fruit and vegetables. The smaller eating places may buy potatoes at wholesale but not other fresh items. Cabbage, carrots, and onions are storable items which are often bought in 50-pound sacks from separate suppliers.

None of the studies was made in the summer; therefore, the extent of buying local produce at public farmers' markets or directly from farmers could not be ascertained. However, apparently restaurateurs show little inclination to buy from farmers or to shop personally for food supplies from any source.

Frozen Food.- Six brands of frozen food are distributed in Minneapolis by direct wholesale distributors. These and other brands are sold by 10 additional firms that feature frozen foods and by many other wholesale and retail food dealers. Eating places bought both from frozen-food specialty houses and from the many other handlers.

Staples.- Eating places in Minneapolis have many sources of supply for staple foods, such as canned and bottled goods and dry products like macaroni, spices, and flour. These include grocery wholesalers, restaurant supply houses, wholesalers' branches, out-of-town wholesalers, manufacturers through food brokers, and retailers. Some independent grocery wholesalers who supply independent retail grocers also supply many of the larger eating establishments. Two large wholesalers do not sell directly to eating places; they have cash-and-carry branches that sell to anyone who buys for resale.

According to one such wholesaler, practically every large independent wholesale grocer in Minneapolis has by now arranged for a cost-plus pricing system that is part of a voluntary (or other) chain system. The essence of these systems is an arrangement whereby member stores are not visited by salesmen but make up their own orders and mail or phone them in to the wholesaler. Credit terms and orders of minimum size are usually specified, as well as related matters of group advertising, store name, and extent of participation. In return, wholesale prices are limited to specified mark-ups over cost for specified classes of merchandise. In one case, these mark-up percentages averaged 3-1/2 percent for certain staples.

According to trade sources, direct sales of staple foods to eating places are typically made at prices that reflect higher mark-ups over wholesaler cost than are charged to retailers. In one case, these mark-ups to eating places were 12 to 15 percent. The difference is related to the method of doing business. Salesmen are employed to call on eating places. Orders of $25 are delivered, whereas in the above case member food stores were restricted to minimum orders of $75. The special stocks carried for eating places are an additional cost factor. In staple groceries, as in meats, it is necessary to distinguish between "purchasing wholesale items," such as case units, and "purchasing wholesale items in wholesale quantities." Again, there is apparently the implied condition on the latter term that one must also be a retailer (or purveyor).

Restaurant supply houses, of which there are four in Minneapolis, actively solicit the eating-place market. The case studies indicate that these houses supply many small and medium-sized eating places. They were not major suppliers of any large eating places in the case-study group, however. This suggests that the larger eating places can buy in quantities that interest the larger wholesale grocery houses. Restaurant supply houses sell significant quantities of their own brands, and usually carry both a fancy quality line and cheaper lines. One such house offers a 5-percent quantity discount for purchases of 25 or more cases.

Flour.- Flour is often bought separately by the larger eating places directly from milling companies in the city. Worth while quantity discounts are available when substantial quantities are purchased on contract for future delivery.

Fairmont

Fairmont eating places have a different situation in regard to their food supplies. Meats are supplied directly by packer-truck routes to eating places that buy wholesale meat items and to grocery stores. Of the 22 street restaurants and hotel dining rooms in Fairmont, 9 bought from packer trucks. These purchases represented about three-fifths of the value of all meat bought by Fairmont eating places.

A somewhat unusual method of handling meats was used by at least four of the nine Fairmont restaurateurs who bought wholesale meats. These four bought from packer salesmen and had the meat delivered by packer trucks directly to a frozen-food locker plant which cut up the meat, packaged and froze part, and held the balance for aging until needed by the eating place. The fee was 2 cents a pound in some cases. This arrangement permitted the smaller eating places to buy wholesale cuts. There was no evidence of any artificial restriction on Fairmont restaurateurs to prevent their buying directly from packer-truck routes.

Most Fairmont restaurateurs who did not buy meat from packer-truck routes bought from retailers, often at a 5-percent discount. In these cases, all meats were pan-ready cuts. Two Fairmont restaurateurs who were close to a locker plant bought meats there at somewhat less than retail. In summary, Fairmont restaurateurs are free to buy wholesale meat items and they do so to a greater extent than Minneapolis restaurateurs, despite the generally smaller places in Fairmont. An official of one of the large packing companies confirmed this conclusion, and noted that packers generally do more direct selling to eating places in smaller cities throughout the country than in the large cities. He surmised that specialized purveyors of fresh meats to eating places would not have a large enough market to operate in, or deliver to, in the smaller cities and towns. A recent development in this market is the specialization of a Mankato meat processor in tenderized round steaks (chip steaks), hamburgers, and other frying meats in frozen individual portions.

Purchasing patterns of Fairmont eating places for fresh fruits and vegetables and staple groceries are roughly similar to those of Minneapolis eating places, but the sources of supply differ considerably. Fairmont has no important wholesale houses in the city; it depends upon wholesale truck routes operating out of Mankato (50 miles), New Ulm (50 miles), Sioux Falls (120 miles), Minneapolis (135 miles), and other cities. No specialized restaurant supply houses serve the city, but grocery wholesalers handle the No. 10 institution sizes. One Chicago wholesaler supplied several eating places with direct shipments of staple items.

Because Fairmont is not a major distribution center like Minneapolis, prices are apparently higher. Four Fairmont restaurateurs commented that prices to them were several percent higher than to Minneapolis eating places. This probably reflects trucking and other distribution costs added to carlot prices in Minneapolis or Sioux Falls.

Practically all Fairmont eating places buy major canned and dry items in case quantities. As would be expected, eating places with annual sales of more than $50,000 buy nearly every staple in wholesale units, but as size of firm decreases, more small items are bought at retail stores, and only major items like corn, peas, soup, flour, and sugar are bought in cases or large bags. Nearly all eating places bought potatoes in 100-pound bags and onions in 50-pound bags the year round from a local purveyor who caters to eating places. Purchasing of fresh fruits and vegetables was sharply differentiated between those with more than $50,000 sales who generally bought crates of common items like lettuce, oranges, and apples from wholesale trucks, and the smaller places that bought from retailers in smaller quantities. Several restaurateurs in the $25,000 or larger annual sales category had a 5-percent discount arrangement with a retailer.

CHAPTER 4.- BUYING AND MANAGEMENT PRACTICES

Producers and distributors of food are vitally interested in the food-buying practices, food preferences, and certain types of management practices of that sector of their total market which is represented by eating places. Such information is not reported in the censuses and apparently little concerted effort has been made to compile it from the original sources, the restaurant operators. Accordingly, for this pilot study of the marketing aspects of the eating-place industry, an attempt was made to obtain such information through interviews with a group of restaurant operators and by a more intensive examination of those firms which cooperated as case studies. In addition to supplying information on particular questions, the interviews provided the director of this study with considerable general knowledge of the industry which was useful in the analytical sections of the study.

The interviews consisted of a series of questions as to food-buying practices, food preferences, and management practices. These questions were asked of 71 Minneapolis restaurant operators or managers, representing essentially a 10-percent random sample of eating places in the city 9/. The 71 interviews represent a random selection of public restaurant operators, except for two drug store managers and one Oriental restaurant manager who declined to be interviewed. The following types of eating places are included:

12	street restaurants with estimated sales in 1948 of $35,000 or more.
27	street restaurants with estimated sales in 1948 of less than $35,000.
11	lunch counters.
5	department or variety store restaurants.
4	hotels.
6	employee cafeterias.
6	institution-sponsored eating places, most of which are open to the public. These include colleges, business schools, and church organizations.
71	

None of the drinking places in the master list was interviewed as the serving of food was relatively incidental in those surveyed. Private clubs, boarding houses, and institutions also were excluded from the interviews in order that all available resources might be concentrated on the more commercial types of firms.

9/ As the sample was small, a relatively large sampling error is involved in the specific percentages cited in the interview results. For example, a sample proportion expressed as 50 percent has a standard error of 6 percent for a sample of this size, which means, assuming a normal distribution, that the true percentage in all such restaurants sampled would be included between 38 percent and 62 percent in 19 of 20 cases in which samples of this size were studied.

211872 O—52 —— 3

The interviews supplied information as to some of the buying and management practices which have developed as restaurateurs have coped with the basic problems of operations 10/. These practices included the quality of foods purchased, use of grades and standards as buying guides, the extent of purchase of processed foods, quantity buying, where to buy, estimation of volume of demand, and control of food wastes.

What quality of foods to serve?

The problem of serving appetizing foods at prices customers are willing to pay is basic to most of the operating decisions and practices of eating places. The Minneapolis survey apparently indicates that the operators of establishments with larger volume of business are more conscious of quality differences. Three-fourths of them believe that their customers are also quality conscious--particularly with respect to use of canned fruits and vegetables. About two-thirds of the restaurateurs who serve fruits and vegetables believed their customers preferred fresh to canned fruits and vegetables. Only about a third of the establishments apparently used higher than standard grades of canned items. The situation was somewhat different for meat. About half of the restaurants bought U. S. Good (pre-1951) "because of better flavor, less shrinkage, more tender meat"; one firm used U. S. Choice; one-third of the firms bought only U. S. Commercial, "to get lean cuts and keep down costs." The remainder of the sample reported buying two grades, using a better grade for roasts and steaks.

How to buy the quality desired?

Information obtained from the interviews shows that restaurant operators in Minneapolis were quite familiar with grades of meat and used them in buying. However, none knew about point grading of canned fruits and vegetables and only a few used U. S. grades in specifying quality. This is an important consideration for producers and marketing agencies which are attempting to supply the kinds and qualities of products that best meet the needs of their customers.

Whether to buy in fresh or processed forms?

Each restaurateur must make a whole set of decisions as to the forms in which he buys his food commodities. These decisions materially affect costs of labor and food. Foods that are processed before purchase cost more than the raw materials, but costs of labor within the restaurant are less. Although data are not available with which to evaluate the net effect on costs, about two-thirds of the Minneapolis restaurant operators queried believed that buying processed foods would reduce total costs to their restaurants. Approximately 58 percent of the operators reported that

---

10/ A detailed summary of the results of the interviews is given in appendix B.

they are tending to buy more of these food supplies in considerably processed forms. Another 6 percent agreed, except in the case of baked goods. However, a third of the operators considered the trend to be in the opposite direction.

Despite the extra labor involved, about 42 percent of the restaurateurs surveyed usually serve fresh fruits and vegetables whenever available at moderate prices because of "customer preference" and "better flavor." Another 12 percent use fresh products about half the time they are available. About 39 percent usually do not or never serve fresh items because of the speed and ease in using canned fruits and vegetables and the saving of labor time. Excluding potatoes, lettuce, and onions, the survey indicated that about 25 percent of the fruits and vegetables served were bought fresh, 65 percent canned, and 10 percent frozen.

Preparation of chicken and turkey for cooking is a heavy labor-consuming chore. Therefore, 23 percent of the restaurants bought chickens in dressed form; 62 percent bought them drawn; and 15 percent paid still more per pound to have them cut up. About half of the larger restaurants bought dressed chickens.

Customer appeal of really good cakes and pies is so great that 38 percent of the eating places surveyed baked their own. Dinner and breakfast rolls were less commonly baked and only 6 percent of the firms baked their own bread.

How much food to prepare?

Estimation of demand for the variety of foods to be served by his establishment from day to day is an important function of the operator of a restaurant. Minneapolis restaurateurs reported using several guides. These included their records on the weekly pattern of business, average volume of sales, and seasonal changes. Many watched the weather carefully. Some operators kept closely in touch with local activities. However, no formal system for estimating demand was reported.

What causes food waste in restaurants?

Before food wastes can be reduced, their causes must be identified. The major causes, according to the survey, were improper handling in transportation and storage of foods before they reached the restaurants, overproduction of prepared dishes with resulting left-overs, excessive portions, and cooking failures.

What factors affect the demand for prepared meals?

According to restaurateurs, people who are in position to make a choice eat out because of the taste and flavor of restaurant meals, the entertainment aspect of restaurant eating, the variety of menu and change of food offered, the additional service and hospitality of restaurants, and the desire to avoid cooking and dishwashing at home. In addition, many people eat lunches out to save time and transportation. Upon further questioning, operators stressed also the size of people's income and the comparative costs of eating out and eating at home.

In what quantities should food be bought?

The case studies yielded specific data as to food purchases which cast light on such questions as the relative quantities of various foods used (discussed in chapter 7) the units in which the various types of eating places buy their supplies, and the prices paid. The latter information could not be analyzed satisfactorily because of the lack of reported data on wholesale and retail prices for the selected cities. Units in which restaurateurs buy are important in evaluating their efficiency as food marketers. Eating places in Minneapolis do not save as much from quantity buying as might be expected. This results from the fact that wholesalers apparently charge slightly higher prices to eating places than to retail food stores. However, restaurants do realize some economy from buying food in larger containers and other units.

A detailed analysis of the unit purchasing patterns of the selected firms has been made 11/. Analysis of Minneapolis firms indicated that staple goods, such as flour, canned foods, and potatoes are bought in wholesale units such as cases, crates, and 100-pound bags. Most of the dairy and poultry products were also large-quantity items, with the exception of small butter, egg, and cream purchases by medium-priced cafes. Hotels and cafeterias bought all their fresh produce in wholesale lots, such as 60 head crates of lettuce. All of the purchases by counter-service establishments of fresh vegetables and half of those of medium-priced cafes were in smaller lots, for example, 12 head bags of lettuce. The two counter-service restaurants also bought their fresh fruit in smaller quantities, but 83 percent of the volume of purchases of fresh fruit by medium-priced cafes was in wholesale lots.

A little less than three-fourths of the meat bought by the firms in the Minneapolis case study groups were in wholesale cuts. Most of the remainder were large-quantity purchases of processed-pan ready cuts. Hotels included in the case-study group bought practically all of their meat as wholesale cuts. But the three cafeterias studied bought about a fifth of their meat in semi-wholesale forms; the medium-priced cafes bought half at wholesale, a little at retail, and about 46 percent semi-wholesale. The two counter-service firms bought all their meat in semi-wholesale forms and quantities.

Results of the case studies are reasonably typical of the medium-sized and large eating places in the city that do the bulk of the away-from-home

---

11/ See appendix E for detailed data. Eating places within each group were combined by adding the value of purchases of each place, thus obtaining percentages weighted by the volume of each place. As most of the establishments combined do not differ greatly in size, this method is reasonably appropriate.

feeding. They are not typical of the entire eating-place industry in the city because the city has far more small places proportionately than the group of firms which were case studies. The results thus overstate the proportion of purchases in wholesale or semi-wholesale form. The small eating places that are underrepresented are more likely to buy food in retail form. Moreover, the two short-order places in the special study apparently are relatively larger and more efficiently operated than most such establishments.

Fairmont eating places in the case studies bought in general somewhat smaller proportion of food in wholesale units than Minneapolis eating places, but in making comparisons the generally smaller size of Fairmont restaurants should be kept in mind. In the case of meat, for example, 61 percent was bought in wholesale units in Fairmont compared to 76 percent in Minneapolis. Fairmont places that buy in wholesale units are apparently able to buy directly from packer-truck routes without any special limitations.

The two Fairmont hotels studied are the only firms that buy most of their food in wholesale quantities and forms. The steak house buys meats, poultry, fish, fats and oils, and dairy products except cheese in wholesale units. In fact, all of the eating places buy their dairy products, excluding cheese, at wholesale. The hamburger shops buy all other food supplies at retail. The medium-priced cafes in Fairmont have similar buying patterns to those of Minneapolis for meats and fresh produce, but they buy substantial proportions of their staples at retail.

CHAPTER 5.- FUNCTIONS AND COSTS OF EATING PLACES

Functions

Eating places as marketers of farm food products provide many services and facilities along with food. These services consist of providing consumers with economic utilities such as (1) form utility, which involves buying, preparing, cooking, and serving food in individual portions; (2) time utility which involves serving hot meals to many people promptly at concentrated times of the day; (3) place utility, which means providing eating facilities at points convenient to people, often in high-cost locations; and (4) service, comfort, housing, atmosphere, entertainment, and other utilities, which vary widely with the type and price class of each eating establishment. Those functions which relate to buying of food were discussed in the preceding chapter.

In order to provide these economic utilities, eating places as food marketers require special facilities and provide many types of labor service. These all involve extra costs over and above the cost of the food. Food costs of 20 Minneapolis eating places accounted for 44 percent of their sales in 1949; 31 percent went for labor, the remainder for other costs which are described below and for profit. The 13 eating places in Fairmont that were studied had food costs equaling 52 percent of their sales. A survey made by the National Restaurant Association in 1940 which covered 240 firms across the country, yielded an average of 47 percent for food costs, 27 percent for labor, and 26 percent for other costs and profits 12/. As an aid to the analysis of these marketing margins the typical facilities and services of eating places are described below.

Services to customers provided by eating places usually exclude delivery. The functions of eating places also usually exclude picking up food supplies, as most raw food is delivered to the restaurant kitchen and transportation charges are included in food invoices and in food cost percentages which are discussed here. Marketing functions of eating places thus are usually restricted to operations on the premises.

Performance of these functions by eating places requires some rather specialized physical facilities in addition to an ordinary business organization. Usually buildings must be located near the flow of traffic, as in office structures of high-rent business sections. Kitchen facilities for processing food are housed in the same high-cost space. Buildings must have or must permit installation of neat cleanable ceilings, walls, floors, and many types of special equipment, including public lounges. Varying degrees of outside appearance and inside "atmosphere" characteristics must be provided to appeal to the type of trade solicited. Equipment for both dining rooms and kitchens needs to be cleanable, because of the sanitation problem when open food and moisture are present. Seating people at tables

---

12/ Medians were used as averages by the National Restaurant Association to avoid the influence of extremely high or low percentages. See appendix F.

or counters requires considerable floor space, in contrast to standing or walking room in food stores. Complete air conditioning is often found necessary to maintain volume of business during warm and humid weather.

Kitchen equipment of large-scale eating places is highly specialized. Because of exposure to moisture, acids, and heat,cooking containers are commonly made of stainless steel and aluminum. Sanitary regulations require that such equipment must be cleanable, meaning rounded corners and finished surfaces. Power equipment, like mixers, must be specially designed to keep lubricants out of food and to permit disassembly for cleaning. Ovens, steam cookers, grills, coolers, and freezers require heating or cooling equipment with accurate control mechanisms. Extensive forced ventilation is necessary. Other equipment includes dishes, glasses, silverware, trays, and conveyors.

Further costs incurred by public eating places in serving meals include repair, breakage, power, fuel, working capital, depreciation, interest, insurance, tax, and "business-risk" charges. Business mortality among such firms is high.

The extent of these physical and financial facilities varies widely with the type and caliber of eating place. For any eating place, however, costs are several times greater than those of a grocery store handling the same volume of uncooked food. Costs of these facilities are generally included in the "other costs and profit" category of cost percentages discussed in the costs section. They are usually described as overhead charges 13/.

Labor services performed by eating places include planning menus; purchasing, receiving, and storing goods; preparing food; serving food; dish collecting and washing; general housekeeping; and business management. Costs of these functions of eating places are included principally under the labor-cost category as discussed in the section on costs, but a part of the cost is included under the "other cost and profit" category because the tasks are performed inside the building and utilize both equipment and and power. The nature of these labor services is described in detail.

Planning of menus is chronologically the first operating service. It varies from the unchanging menu of a short-order, "counter and stool" operation to specialized advance planning by graduate dietitians in large eating establishments. There is close interplay between the food that is currently available at favorable prices and the planning of menus.

13/ Further detailed description of the items of equipment needed and the approximate cost for several types of eating establishments are contained in chapter 5 of "Establishing and Operating a Restaurant," op. cit. This manual also describes current operating services.

Purchasing follows the needs of the planned menu in relation to stocks on hand. A daily survey of perishable stocks on hand is typical. Purchases of staple foods are made weekly in many places to earn quantity discounts, to meet salesmen within a limited time period and, in some large places, to permit use of a formal abstract system (invitation for bids with awarding of purchases to lowest bidders). High quality meats (steaks and tenderloins, of U. S. Choice and Prime grades) are often bought some time ahead, as such meat may not be in adequate supply on any particular day. In each case studied, purchasing arrangements such as price range, credit terms, and the choice of specific suppliers or the method of selecting from several alternative suppliers were under control of top management. The computation and daily ordering of quantities needed and the choice of one supplier from a group of suppliers were often delegated to the cook. Most large places used some form of requisition to the purchasing department. In each case, most or all of the actual ordering in Minneapolis was done by telephone or by word of mouth to delivery men. Little actual ordering was done through salesmen not handling merchandise although periodic calls by salesmen to quote prices and handle adjustments are common.

Receiving and storing food is a manual function, but it typically carries the responsibility of checking quantity and apparent quality of food received. All Minneapolis food suppliers apparently require the initials of some employee of an eating place on food invoices. This is for the suppliers' protection. It puts some burden of checking for full receipt of goods on the employee who signs, regardless of how much or how little the management may stress the checking of merchandise received. All the eating places studied are anxious to verify the weight of meat received, although many firms are less careful on other foods. One very large place specifically weighs all meats and all fresh fruits and vegetables (even though in crates, to check on the fullness of the pack). Receiving and storing includes the function of opening cases and crates. For canned goods, it includes placing cans on shelves near the kitchen.

In early 1950, the general attitude of the eating places surveyed was to buy approximately as needed rather than to buy any appreciable quantity for storage. Exceptions were canned goods when there was an apparent chance of short supply later. This applied particularly to peas (unfavorable spring weather) and tomato products (sometimes in short supply before the new packs arrive. Eating places do not wish to shoulder the responsibility of extensive storing on top of their already varied duties. Many do not have facilities for storage. In the first half of 1950, when the general outlook was for falling food prices, short buying was encouraged. The careful attention usually given to the quantity and quality of food received is necessary when it is recalled that the objective of restaurant purchasing is to obtain the maximum quantity of servable food per dollar of expenditure.

Preparing and cooking of food are technical operations. Preparation includes the subphase of cleaning and trimming, particularly for fresh fruit and vegetables, that is usually done by lower-paid assistants. Meat cutting and cooking, bread and pastry baking, and other actual cooking are the phases that require considerable skill and experience.

Serving varies with type of eating place. Cafeterias generally serve plates from the hot counters. Serving of meat varies even in cafeterias, however. Some places cut meat by machine to precision portions in the kitchen; others do the cutting at the counter. Cafeterias are able to dispense with waitresses, although costs of counter equipment tend to offset this advantage.

Collection of soiled dishes is performed by "bus" persons in cafeterias, by waiters or "bus" persons in table-service operations, and by waiters in counter-service operations. In Minneapolis dishwashing is mechanized in all but a few of the smaller places. Health department rules as to use of hot water and suitable cleaning agents and equipment are at least partly responsible, although higher labor costs and the possibility of operating with fewer dishes have doubtless aided this development. The amount of equipment auxiliary to the dishwashing unit itself, however, varies considerably. It may include a pre-rinse arrangement, automatic feed belts, and drying equipment. In Fairmont dishwashing was done by hand in all small and some medium-sized places.

In any eating place, the general housekeeping is a major function. Thorough cleaning is necessary because of the large number of moisture, grease, and food particles in the air that fall on tables, chairs, booths, and floors. Kitchen walls and ceilings need regular cleaning, as do floors, utensils, and equipment. Establishments with complete air-conditioning can control moisture and odor in dining rooms, but the air-conditioning itself requires extra maintenance for air filters, motors, ducts, and outlets.

Business management includes the accounting and clerical functions of taking in cash, computing payrolls, maintaining food-cost controls, and other accounting and management functions.

Some idea of the relative amounts of time required for the various functions performed by labor can be obtained from the following data.

Table 6.- Distribution of total labor time in three food-service operations

Function performed by labor	Operation I, cafeteria	Operation II, cafeteria	Operation III, counter service
	Percent	Percent	Percent
Sales	21	19	41
Food preparation	36	32	25
Cleaning	33	43	23
Operating	10	6	11
Total	100	100	100

Hatch, Charles Weston. A Survey and Analysis of Labor Hours in Three Food Service Operations. Thesis (M.A.) School of Business, University of Chicago, December 1947. (Unpublished.)

The same manuscript states that in these operations, the number of customers handled per labor hour varies between 4.8 and 6.2 and averages 5.5. Additional data concerning labor requirements are given in chapter 6.

Costs and Mark-ups

Total costs of performing these marketing functions of eating places were studied in selected Minneapolis and Fairmont eating places. Data are presented in terms of the food, labor, and other costs experienced by these establishments, expressed as percentages of sales.

Food costs given here are gross food costs, that is, they include food for employee meals. Sales figures include the amounts employees paid for food. These amounts are much lower than menu prices; they may be as low as 25 cents for one meal a day and 50 cents for two or three meals a day, or an amount equal to 60 or 75 percent of the menu price of meals eaten by employees. Food-cost percentages given herein therefore overstate, by a few percentage points, 14/ the actual food-cost percentages for customer meals alone. Expressing or ascertaining food costs without employee food, however, would be difficult, as furnishing food to employees is an integral part of the entire operation. The gross cost of food includes cost of transportation to the eating-place door and also includes various degrees of processing. Buying pan-ready cuts of meat would mean that some labor charges would be included in food costs for one establishment, whereas an establishment buying carcasses would charge the equivalent labor for meat cutting to cost of labor.

It is the custom in the restaurant industry to discuss margins in terms of the realized food-cost percentage rather than as a gross margin on sales, say 55 percent for a 45-percent food cost, or as a mark-up on cost, 122 percent in this case. This custom is evident in trade publications and it was recognized in Ceiling Price Regulation No. 11, issued March 13, 1951, by the Office of Price Stabilization. Perhaps the custom arose because the mark-up-on-cost percentages sound high. Many restaurants face keen price competition, and because of this their profit emphasis centers on keeping down food costs rather than on manipulating prices.

The labor cost percentages include all payroll costs except compensation to the proprietor, his family, and/or the manager. Percentages do not include tips. If tips were considered, all the ratios would change markedly. Consider the hypothetical example in table 7. Ten percent is used, although this is probably a low tipping percentage for high-priced establishments. At any rate, consideration of tips materially alters the percentages of labor cost. In analyzing all types of business sales data, the various aspects of tipping must be considered because tips are not recorded in the cash registers. The role of tips in the national situation

---

14/ The cost of employee meals averaged about 4 percent in 1940, according to data in Report on Nation-wide Survey of Restaurant Operating Data for 1940, National Restaurant Association, Chicago, 1941. See appendix F.

can be seen from estimates of the National Income Division of the Department of Commerce, which indicate that tips amounted to 3½ percent of sales of meals and beverages in 1948 [15]. If one assumes that tipping amounts to 10 percent in places where it is practiced, the above ratio suggests that tipping accompanies roughly a third of purchased meal and beverage sales.

Table 7.-Effect of tips on labor cost percentage--a hypothetical example

Cost category	Excluding tips	Including tips	
	Percentage of menu price	Percentage of menu price	Percentage of menu price plus tip
	Percent	Percent	Percent
Food cost	43	43	39
Total labor cost	32	42	38
Direct labor cost	32	32	
Tips	--	10	
Other costs	25	25	23
Total cost	100	110	100

The "other cost and profit" percentages are the residuals; they include all current operating supplies and expenses, depreciation on buildings and equipment, interest and taxes, top supervisory salaries, and profit or proprietor's return.

Minneapolis Costs.- Costs of food and labor in selected Minneapolis eating places were collected in the case studies and are presented in table 8. These costs are expressed as percentages of sales at menu prices.

The three cafeterias are the largest in average size; they are similar both in physical operation and in cost ratios. When the study director commented on this similarity to a well-informed restaurateur, the reply was that part of the reason was that all three were subject to the same food and labor markets. An additional reason, according to this restaurateur, is that all local operators have regularly attended lectures by a private restaurant-management consultant, who has postulated a 40-percent food cost as feasible and desirable in all cases if careful control of food buying, handling, and portioning is maintained. The local restaurateur suggested that if every place aims at a 40-percent food cost and carefully controls food, it is natural that unexpected waste will raise the percentage slightly and that final results will be similar. Roughly the same reasoning was applied by him to the postulated 25-percent labor cost, and the fairly uniform results of three Minneapolis cafeterias at the 33-percent figure.

---

[15] Survey of Current Business, National Income Supplement, July 1950, table 30.

Table 8.-Operating costs of selected eating places as percent of sales, Minneapolis, 1949

Type of eating place	Eating places	Food cost			Labor cost			Food and labor cost	Other costs and profit
		High	Low	Average	High	Low	Average		
	No.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
Cafes-medium priced	7	1/ 48	2/ 33	43	33	29	31	74	26
Cafes-high priced	2	1/ 49	42	45	32	33	33	78	22
Cafeterias-medium priced	3	44	41	42	34	32	33	75	25
Hotels	2	47	39	43	48	21	34	77	23
Department stores	3	52	47	49	35	24	29	78	22
Counter service	1	--	--	43	--	--	26	69	31
Fountain lunch	2	46	46	46	30	27	29	75	25
Simple average of individual eating places	(20)			44			31	75	25

1/ The two cafes with highest food-cost percentages in the two groups served liquor.

2/ The next highest food cost was 42 percent.

Operators of cafeterias hesitate to employ the very cheapest grades of labor in the public parts of their establishment. Each of the three cafeteria operators said that it seems impossible to accomplish a 25-percent labor cost in Minneapolis.

Operators of cafeterias made a point of the fact that they must pay a living wage in cash because their employees do not receive tips. Each of the three cafeterias pays a full wage and then charges employees for meals eaten. Two places give a 25-percent discount and one a 40-percent discount from the menu prices. These cafeterias felt that such a policy was necessary to avoid wasted, uneaten food, and to control choices of the expensive types of food by employees. The higher price level for food is mainly responsible for this closer control of the disposition of raw food.

Six of the seven medium-priced cafes reported food costs between 42 percent and 48 percent. The seventh, with the low of 33 percent, is an efficient establishment in a high-rent location in which higher overhead costs must be met. Labor-cost percentages were similar in all medium-priced cafes.

Costs of labor in cafes and cafeterias were similar, even though it would be expected that the labor-cost ratio might be higher in cafes as customers are given more service there. Tips are not included in labor costs for cafes, however. Thus an important part of the costs of labor is omitted.

Department-store eating establishments had a higher average food cost than any other group. Labor costs varied widely, but they are associated more with volume and differences in utilization of labor than with extent of table service. Total costs of food and labor of these firms were the highest of any group, suggesting that such eating establishments may be partly "loss leaders." If the expensive furnishings and decorations sometimes provided with the food and service are considered, this is very likely to be true.

The ratios in one high-priced cafe were quite similar to those of cafeterias and medium-priced cafes. But the ratios for the other firm were significantly different. Three places served liquor--a medium-priced cafe, a high-priced cafe, and a hotel. These two cafes had appreciably higher food costs; they averaged 48 percent. This seems to indicate that cafes serving liquor can charge slightly less for food as they depend upon the bar to help support overhead and profits. One such restaurateur offered exactly that comment. The hotel that served liquor had a large banquet business and maintained a wide margin for overhead. A low food-cost percentage resulted regardless of the liquor operation.

Food-cost ratios for the two counter-service operations which served only food cooked to order were slightly lower than the cafe and cafeteria ratios, with a good margin of net profit. Sandwich business is said to provide a wide margin, in contrast to the difficulties experienced by many operators in maintaining an adequate margin on servings of roast meats.

Fairmont Costs

Study of the costs of eating places in Fairmont led to the conclusion that costs of food in that city make up a considerably larger proportion of sales at menu prices than is true in Minneapolis (table 9).

Table 9.- Food costs of selected Fairmont eating places as percentage of sales, 1949

Type of eating place	Number	Range of percentages	Average percentage
		Percent	Percent
Medium-priced cafes 1/	9	48 to 66	55
Hotels and steak house	3	46 to 54	50
All case-study firms 2/	13	40 to 66	52
All Fairmont establishments 3/	33	40 to 66	55

1/ Includes a variety-store luncheonette.

2/ Includes a hamburger shop.

3/ Based on reported data for establishments accounting for approximately three-fifths of total sales and on estimated data for remaining establishments.

Prices of meals are apparently similar in the two cities, though they are perhaps slightly lower in Fairmont for comparable food and atmosphere. But the prices paid by Fairmont restaurants for their food supplies apparently average slightly higher than those paid by Minneapolis firms. This is partly because of the smaller volume of purchases and partly because of additional transportation costs on foods shipped in. Meat is shipped in from South St. Paul, Austin, Albert Lea, and Sioux Falls, all 100 miles or more away. Off-season fresh fruits and vegetables come from Sioux Falls, Mankato, or Minneapolis. Staple groceries are handled by wholesalers in somewhat nearer towns. Thus, Fairmont's location at some distance from some major wholesale distributing centers means added trucking or other transportation costs over and above the Minneapolis-St. Paul wholesale prices for many foods. This does not hold true for such foods as milk, eggs, potatoes, onions, vegetables in season, and bakery products, which are produced locally.

Certain factors, other than the higher food prices, contribute toward raising the ratio of costs of food to total sales of food. One of these is the apparently larger quantity of food served in Fairmont eating places, compared with servings in Minneapolis restaurants. Several places serve two "scoops" of potatoes, and most places appear to serve somewhat thicker slices of meat.

Differences in the situations as to labor and overhead costs, such as rent, between Minneapolis, a highly urbanized area, and Fairmont, a small city in a rural area also contribute to the relatively higher food costs in Fairmont. Labor-cost percentages for Fairmont eating places are not generally comparable with those in Minneapolis, partly because many Fairmont eating places are family operations to which proprietors and relatives contribute half or more of the total hours of labor involved and partly because of lower wage rates. In Fairmont each proprietor was on hand to assist physically in cooking, serving plates, or waiting on customers at nearly every noon and evening meal, whereas fewer Minneapolis proprietors physically assisted with the food operations. Related to this is the fact that eating places in Fairmont are usually smaller. Apparently proprietors of small eating places, wherever situated, typically perform more direct labor, in addition to the business-management function, than in large establishments. Fairmont proprietors receive some of their return in the form of profits for their entrepreneurial function, but this is considerably augmented by wages for direct labor performed by themselves and their families.

Other Cost Data.- Data as to operating costs of eating places in other parts of the country are available only from spot studies and occasional surveys. The Nation-wide survey made by the National Restaurant Association in 1940 yielded data on all major categories of costs of 240 eating places. These data are summarized in table 10 in terms of ratios of average food costs, labor costs, 6 types of other costs, and profits to sales.

Table 10.- Major costs as proportions of total sales of 240 eating places in the United States in 1940 1/

Category	Average relationship to total sales	
	Percent	Percent
Food cost		46.7
Labor cost		26.9
Other costs, total		22.0
Utilities	3.5	
Operating supplies and services	6.8	
Taxes and insurance	1.1	
Depreciation and amortization	3.1	
Rent	5.2	
All other expenses	2.3	
Profit		4.4

1/ National Restaurant Association. See appendix F. Medians used as averages.

Data as to detailed costs of eating-place operations were presented by George Kraft at the University of Chicago in 1947 at a Restaurant Administration Program conference course (table 11). Kraft obtained the

Table 11.- Restaurant operating percentages reported by George Kraft 1/

Item	Percentage of sales
	Percent
Profits	6.0
Pay roll (including manager)	28.0
Rent	7.0
Advertising	1.0
Cookery fuel (gas, etc.)	2.0
Light, power signs	1.5
Menu printing	.5
Laundry and uniforms	1.5
Office supplies, printing, etc.	.5
Replacements	2.0
Cleaning supplies	.5
Insurance, taxes, licenses, etc.	1.8
Water, ice	.5
Interest and depreciation	4.2
Miscellaneous	3.0
Total, excluding food	60.0
Residual allowable for food	40.0
Total	100.0

1/ Conference Course Lectures on Management and Management Controls in the Restaurant Industry, June 1947, The School of Business, University of Chicago, in cooperation with the National Restaurant Association, p. 66.

data from a prewar study made by **Restaurant Management Magazine.** **The** data were presented, in rounded terms, for a table-service type of operation to indicate the percentage that may be allowed for food after allowing for operating costs based on past experience and the desired margin of profit.

Comparison of Costs and Mark-ups of Eating Places in Minneapolis, Fairmont, and the United States

The ratios of food costs to total sales at menu prices described in preceding sections of this chapter can be readily converted into terms of mark-ups over food costs (table 12). These mark-ups from costs of food to total sales of food at menu prices varied from 81 percent for Fairmont public eating places in 1949, to 114 percent for the 1940 Nation-wide survey 16/, to 129 percent for Minneapolis in 1949. The difference in time and changes in relative prices between 1940 and 1949 make direct comparisons impossible, but it is reasonable to expect that the true national average lies between that for large cities such as Minneapolis and that for small cities like Fairmont.

As eating places in Fairmont were generally smaller and as smaller places usually buy closer to the retail level with respect to prices, and extent of processing and other services, the lower mark-up of 81 percent for Fairmont, compared to the Minneapolis rate of 129 percent and the United States survey rate of 114 percent, does not entirely reflect lower marketing margins for food sold through eating places in smaller cities. The lower mark-up tends to be associated with higher purchase prices for food supplies, suggesting that more processing is included in the prices paid by such eating places and/or that basic food costs are higher in small cities.

Comparison of Functions and Costs of Eating Places and Retail Food Stores

Retail food stores and public eating places represent the two major types of final food outlets. Although private eating facilities, as defined in chapter 2, are often run on different financial bases from public eating places, the operations are similar. Both are quantity kitchens serving prepared meals. The costs and margins of public eating places can therefore be considered as reasonable approximations of those for all away-from-home food consumption. Retail food stores supply the largest part of the food for family household consumption.

16/ See table 10. Apparently relatively large eating places were included, and it is likely that these would tend to be progressive establishments. As large places, they probably buy at essentially wholesale prices and results are therefore useful in comparison to retail food stores. To the extent that establishments in the survey are above average in efficiency and profits, the average food cost for the nation may be understated, and therefore the marketing margin may be overstated.

Table 12.- Food costs as a percentage of sales by selected eating places, gross margin on sales and mark-up from food cost, Minneapolis and Fairmont 1949, and United States 1940

Item	Minneapolis, 1949		Fairmont, 1949		United States
	Eating places	Average cost ratio	Eating places	Average cost ratio	1940 median cost ratio 1/
	Number	Percent	Number	Percent	Percent
Food costs as percentage of sales:					
Medium-priced cafes	7	43	8	55	
High-priced cafes	2	45	1	2/	
Cafeterias	3	42	---	---	
Hotels	2	43	2	52	
Department-store restaurants	3	49	3/1	2/	
Counter service	1	43	1	2/	
Fountain lunch	2	46	---	---	
Average food cost 4/	20	44.3	13	52.3	46.7
Weighted average food cost, data from case studies applied to city as a whole 5/		43.7		55.4	---
Gross margin on sales 6/		56.3		44.6	53.3
Mark-up from food cost to sales volume		129		81	114

1/ 1940 data collected by National Restaurant Association from 240 eating places in the United States.

2/ Similar to data for Minneapolis. Exact data withheld to avoid disclosure of information on particular firm.

3/ Located in medium-sized variety and dry goods store.

4/ Simple average of data for case study firms, not weighted by sales volume.

5/ Weighted average for cities consists of simple averages for each type of eating place in the case studies weighted by the actual sales of each type as estimated in chapter 2.

6/ Based on the weighted averages for Minneapolis and Fairmont and median for the national study.

Major exceptions are food consumed on farms where produced and food sold directly to the final consumer by producers and processors.

Eating places and food stores are similar in that both supply form, time, place, and other utilities to final retail consumers and handle roughly the same assortment of basic food items. But marketing costs of eating places are a great deal higher because many more economic utilities are supplied by restaurants than by retail food stores with a given volume of food. Provision of these utilities necessitates the performance of specific functions. The listing in table 13 provides a brief comparison of the functions performed by eating places compared to those of retail food stores as a background for understanding the differences in costs.

Table 13.- Comparison of functions performed and facilities required by eating places and retail food stores in marketing food 1/

Functions performed	Eating places	Retail food stores	Facilities required	Eating places	Retail food stores
Menu planning	X	---	Building	X	X
Production scheduling	X	---			
Purchasing	X	X	Public washrooms	X	---
Receiving and storing	X	X	Store fixtures	Elaborate	Simpler
Display	---	Extensive			
Preparation and cooking	X	---	Kitchen equipment	Elaborate	---
Serving	X	---	Taxes, interest, etc.	X	X
Dish collecting and washing	X	---	Working capital	X	Larger
Housekeeping	Rigorous	X	Skilled labor needs:		
Business management	X	X	Cooks	X	---
			Other	X	X

1/ "X" represents performance of function or requirement of facility; " - " represents the opposite.

Planning of menus in eating places is complicated by the desire of patrons for variety and "excitement" in prepared meals, whereas considerations of simplified kitchen production and utilization of foods on hand encourage restricted menus. Food stores carry practically everything and customers choose whatever they wish. Eating places must ascertain and reasonably satisfy customer desires. Production scheduling may be a part of menu planning, but it deserves separate consideration because production relates to perishable products that are prepared for unknown demand. Although unsold food may not be wasted, flavor deteriorates, extra labor cost is involved in further handling, and leftovers probably have a reduced sale value. Retail food stores are concerned only with selling the original commodities without adding much if any additional cost of processing. Purchasing in eating places must therefore be closely tied to menu planning. The generally smaller physical quantity of food moved through eating places results in less flexibility in quantities purchased than in retail food stores.

Receiving and storing food are probably about the same operations in two types of food outlets. Eating places are close enough to final consumption to check nonstaple foods for full weight to a greater extent than food stores. Storing staples in eating places and food stores is probably similar as in both cases are opened and cans and jars are placed on shelves. Display, although it is a major function of retail food stores, is practically nonexistent in eating places other than cafeterias.

Preparation of meat may be somewhat similar in the two types of marketing agencies in that both usually reduce wholesale cuts to pan-ready cuts. There would be an exception for eating places that buy pan-ready cuts. Preparation of fresh fruits and vegetables is unique to eating places; it includes the peeling of potatoes and onions and other related operations which require special machines, sinks and much labor. Preparing canned and bottled goods in eating places may only require the opening of containers. Even this is not required in food stores.

Cooking is done only by eating places. It constitutes a major expensive function which requires careful control if waste is to be avoided. Serving individual portions and transporting them to customers is done only by eating places, as are collecting and washing of dishes.

Problems of housekeeping and sanitation in eating places are made more difficult by the presence of unprotected foods and the cooking and dishwashing operations that fill the air with food and moisture particles. Daily washing of floors in kitchens and dining rooms is common in eating places. In food stores, daily sweeping is probably satisfactory.

Business management in eating places is more burdensome for equal physical volumes of food sold because food is handled, priced, and paid for in individually cooked portions rather than in the family-sized, unprepared units handled by food stores. The average sale per customer in eating places is appreciably smaller than the average sale per retail-store customer. Some retail stores provide credit and delivery services that are not usually offered by eating places.

Building facilities must be more elaborate for eating places than for food stores handling comparable quantities of food because space is needed for the many services performed. Seating customers at counters or tables during two or three short rush periods in the day requires more floor space per customer than does standing room for grocery shopping. Public-lounge facilities are needed in eating places but not in grocery stores.

Store fixtures in customer areas of eating places are more extensive for the same reason. Equipment for "behind-the-scene" production in kitchens is also much more extensive in eating places because of the processing of unprotected food, with necessity for meeting requirements of sanitation. Costs of taxes, interest, depreciation, repairs on equipment, utilities, and operating supplies related to more elaborate building, fixture, and equipment needs are therefore much higher in eating places for equal quantities of food than in food stores. On the contrary, because of the relatively large inventories, requirements for working capital are probably greater in food stores.

Business risk charges may not be formally recognized but certainly they exist in eating places, as a result of high rates of turn-over and of business failure. Turn-overs and failures are also common in food stores, so that the two types of business may be comparable in this respect.

Skilled labor is needed in eating places for menu planning and cooking but it is not needed in food stores. Even relatively unskilled employees, such as waitresses, require more supervision and training in handling food and in customer relations than do unskilled employees in food stores.

Therefore, because of the many additional functions performed in marketing food in the form of prepared meals, the costs or marketing margins for eating places should be expected to be a great deal higher than those for retail food stores.

CHAPTER 6.- EFFICIENCY OF EATING PLACES AS MARKETERS OF FOOD PRODUCTS

The problem of the efficiency of eating places as marketers of farm food products is important because eating places market about 16 percent of the country's food supply. Accordingly, the efficiency with which eating places utilize factors of production affects consumers, restaurateurs, and agricultural producers is considered. Next, attention is focused on the factors that contribute to the efficiency of eating places--supplying agencies, control of food costs, and economic utilization of labor, equipment, materials, and space.

Consideration of Various Aspects of Efficiency of Public Eating Places

To begin with, a simple measure of efficiency is lacking. Instead a number of concepts of efficiency are pertinent to this study. According to Sumner H. Slichter, 17/ "Efficiency...relates simply to the ratio of results achieved to the means used. It follows that there is no such thing as efficiency in general or efficiency as such--there are simply a multitude of particular kinds of efficiency.... Among the almost numberless kinds of efficiency three stand out as of particular importance: engineering or physical efficiency, the relationship between physical quantities consumed and physical quantities produced; pecuniary or business efficiency, the relationship between dollars spent and income obtained; and social or human efficiency, the relationship between human costs incurred and human satisfaction or benefits produced."

It is appropriate here to consider the efficiency of eating places from several standpoints: (1) The efficiency of eating places as a part of the whole economy, termed marketing efficiency, is most comprehensive because it considers the efficiency of all marketing agencies involved in handling food before it is received by eating places, as well as the efficiency of eating places themselves in the process of supplying meals to consumers. (2) Efficiency of eating places from the consumers' standpoint depends upon the relation of menu prices paid to total food and services received. (3) The efficiency of eating places from the standpoint of the individual firm depends upon the input-output relationships in a monetary sense. The objective of the entrepreneur is to realize a profit, generally a continuous profit over a period of years. This is closely related to the engineering concept of efficiency because realization of profit depends heavily upon maximum utilization of labor time and of food materials bought for serving. (4) Efficiency of eating places from an agricultural producer's view might be one of minimizing the share of the consumer's dollar retained by marketing agencies. A somewhat broader viewpoint of agricultural producers, however, includes considerations that favor an expanding volume of total food consumption, both at home and away from home.

17/ Slichter, Sumner H., The Encyclopedia of the Social Sciences, vol. 5, p. 439.

It is apparent that marketing efficiency involves the three particular kinds of efficiency suggested by Slichter--engineering, business, and social efficiency. Furthermore, it appears likely that, under the competitive business conditions which exist in the eating-place industry, an eating place that is efficient from any one of these standpoints tends to be efficient from other standpoints as well.

Marketing efficiency takes into account the economic resources required in a given operation to provide desired consumer utilities. "Desired consumer utilities" include meeting the basic need of an individual for a prepared meal when he is hungry and has neither the time nor the facilities to prepare a meal himself. Furthermore, it covers consumers' choices among the wide variety of kinds, quantities, and qualities of foods that make up meals offered at various prices, degrees of convenience and service, and the different types of atmosphere supplied by eating places. In most urban areas, an extremely wide price range exists between the cheapest and the most expensive meal, but the nutritive value of the meals differs much less.

From the standpoint of marketing efficiency as well as from the standpoint of the consumer, it can be said that the more efficient eating places are those that furnish desired food and related services to final consumers at minimum cost. Food and services that consumers buy under "free-choice" conditions may reasonably be considered as consumers' wants. Free-choice conditions include the absence of monopoly in the eating-place industry. Such an assumption is reasonable for most cities. "Minimum total cost" to consumers includes both the cost of supplies purchased by eating places as well as the cost of operating eating places.

In evaluating the efficiency of eating places, the simplest comparisons are between establishments that offer similar food and services. For example, consider a group of cafeterias that are very similar with respect to quality of prepared food, quantity per serving, service and atmosphere, convenient location, and all other consumer utilities. The cafeteria with the lowest menu prices would be considered most efficient from the consumer standpoint.

Apparently, under certain conditions, the volume of business realized by an eating place is a reasonably good measure of its efficiency from the consumer standpoint. The volume of business shows the extent to which the place provides desired food and services at prices consumers consider acceptable. These conditions would be those under which consumers are free to choose among several eating places in each of several types of service (cafeteria, counter service, or table service) in an area within convenient transportation distance and where the total capacity of eating places is large enough so that consumers are not forced to patronize any place opening its doors. These conditions probably exist in most city loop areas.

From any of the standpoints mentioned above, except that of consumers, it is necessary to inquire beyond the menu price, as the same prices may be charged for similar food and services but the composition of the costs may differ significantly. Two factors in particular give rise to variation in the cost composition of identical menu prices for similar food and services. One is the extent to which food is processed before delivery to the restaurant. As processing charges represent primarily labor costs by processors, greater processing usually increases the food-cost percentage and decreases the labor-cost percentage. The higher price per pound for boneless meat may include an adjustment for a different weight basis, but this component in itself presumably does not affect costs of food portions as the latter eventually are based on cooked weights. The second factor that causes composition of costs to vary is the substitution of machinery for labor, which tends to reduce costs of labor and to increase charges for power, maintenance, and depreciation. Such variations in the composition of costs may reflect a different combination of the factors of production with practically no further effect, or they may affect the efficiency of eating places in ways that are not reflected in menu prices to consumers. It is probable that these variations would alter operating ratios by only a few percentage points.

The profit margin to *operators* may be quite different in two eating places that are similar in price, food, and service. If few or no profits are earned in one of the two similar eating places, that place is inefficient from a business standpoint. If one of two such places realized high profits through below-average wages, then broad economic effects, such as decreased community purchasing power, should be taken into consideration. Below-average wages would be an unlikely condition in present-day organized labor markets. If the employer were able to excel in utilization of labor and thereby realize a large profit, neither labor nor the consumer would lose. Labor would have a better chance to obtain increased wage rates as a result of the favorable financial condition of the firm.

From the short-run point of view of an *agricultural producer*, eating places with small gross margins above food costs would be the most efficient marketers of food products, other things being equal. In this way such eating places keep a small share of the consumers' dollar. But such eating places might have small gross margins because they buy more raw food relative to the cooked food served and are careless in handling food. In this case consumers would not benefit because they neither receive larger portions nor are charged lower prices. The carelessness would probably decrease or eliminate the profit margin, therefore, it would decrease business efficiency. These careless establishments would buy slightly larger quantities of food from agricultural producers, it is true, but they would probably be unstable outlets and possibly not of long-run advantage to agricultural producers.

The long-run objective of agricultural producers is undoubtedly one of maximizing total income, a function both of price and of physical quantities sold. Eating places could help to accomplish this objective by minimizing the portion of the consumers' dollar retained, thus permitting lower menu prices (and so encouraging people to eat more food and/or higher priced foods such as meat), and possibly permitting the eating places to pay higher prices for the food they buy. The general level of food consumption rates in moderate-priced eating places, indicated in table 33, is apparently rather similar to that in Minneapolis-St. Paul homes and in the country as a whole, so that a mere shift of consumption from homes to such restaurants may not affect the total consumption of food, although it would affect certain food groups. Moreover, the rates of consumption in eating places are affected by the greater proportion of adults eating in them.

Consumption of food (actually disappearance of food) per capita in higher-priced eating places is, however, considerably higher. Therefore, any factors that would increase patronage at such eating places would generally benefit agricultural producers. These factors include high national income directly, and other social or economic changes conducive to eating out less directly.

In general, any attempt to evaluate the efficiency of a single eating place must be either (1) a comparison of that place to similar places, as suggested above, or (2) a detailed time and motion study of elemental physical functions performed to determine the optimum labor and capital needed to perform them and the local cost thereof. Most commercial literature on restaurant management is oriented partially in the direction of efficiency of time and motion.

No method of evaluating the efficiency of the eating-place industry as a food-marketing agency is apparent other than a mass time and motion study with consideration of local costs. This report has simply listed the marketing functions performed and the marketing margins that exist in selected eating places. The previous chapter indicated that more economic utilities are added to food by eating places than by food stores and that the mark-up over cost in eating places is about six times that of food stores. No immediate way is available to determine whether the large absolute mark-up or the large mark-up relative to that of food stores is justified. But available data on profits of eating places show moderate profit margins, and the high rate of business mortality is evidence of the business risk involved.

Effect of Sources of Food Supplies on Efficiency

The size of an eating place materially affects its ability to buy food supplies at low cost as well as its economic utilization of labor, equipment, materials, and space. Efficiency may improve rapidly up to the point of moderate size at which most purchases can be made in wholesale units. This moderate point of possibly $50,000 of annual sales also permits better division of labor, fuller utilization of employees' slack periods, and the capacity to utilize labor-saving equipment.

Efficiency of purchasing operations of eating places depends upon the use of as low-cost suppliers as possible. In terms of the unit cost of handling foods, a supplier who sells in smaller than wholesale units and who makes deliveries of small quantities has a much higher per unit cost than a wholesaler who sells only in wholesale units in larger quantities. Take meats for example. One large meat dealer in Minneapolis listed three conditions for quoting a less-than-retail price to eating places: (1) ordering roughly 24 hours before delivery is expected, (2) taking entire wholesale cuts in one delivery, although these cuts would be divided further into chops, roasts, and other cuts by the dealer, and (3) a minimum weekly order, deliverable daily if desired, of appreciably more than 100 pounds of meat. With beef rounds in the 65-pound neighborhood, sirloin butts 22 pounds, and pork loins 14 pounds, only a fair-sized restaurant can regularly buy and use wholesale cuts, that is, a restaurant in or above the $50,000 annual sales range.

The choice among food suppliers is closely related to the volume of eating-place operations. Office of Price Stabilization regulation No.-24, dated April 30, 1951 indicates the prices paid for beef bought from three types of suppliers of "fabricated cuts." These schedules are for the same cuts and grades of beef; they should therefore be entirely comparable. They indicate the higher cost of buying from restaurant and hotel supply houses, which customarily render special services. Table 14 contains the simple average ceiling prices of the 35 to 37 items of beef cuts, the exact number varying with the price list. The simple average gives undue weight to the high-priced cuts, but it is adequate to show the approximate relationship among the price levels.

Table 14.- Ceiling prices of beef cuts sold to purveyors of meals, classified by grade 1/

(Prices per 100 pounds of meat)

Type of meat supplier	Prime		Choice		Good		Commercial	
	Average price	Percent of branch house price	Average price	Percent of branch house price	Average price	Percent of branch house price	Average price	Percent of branch house price
	Dol.	Pct.	Dol.	Pct.	Dol.	Pct.	Dol.	Pct.
Packers' branch houses or other packer outlets	96.41	100.0	89.31	100.0	83.93	100.0	76.86	100.0
Combination distributor (both eating places and food retailers)	99.49	103.2	91.79	102.8	86.26	102.8	79.76	103.8
Hotel supply house	102.16	106.0	94.29	105.5	88.60	106.6	81.28	105.6

1/ Ceiling Price Regulation No. 24, April 30, 1951.

Conditions under which packers' outlets sell to purveyors of meals depend somewhat on the local situation, but in any event they depend partly upon the volume of the eating place. Packers seldom sell to very small eating places, and the latter therefore depend upon the higher-cost suppliers. To the extent that larger places are able to buy wholesale cuts, a different type of saving may also be available.

The regulations of the Office of Price Stabilization also contain price ceilings on sales by retail meat dealers to eating places or to other retailers. These ceiling prices are somewhat less than the regular retail ceiling prices; they amount to a 4- to 10-cent per pound differential for the group of common roasts. The price ceilings on sales by retailers to eating places and other retailers are both higher and lower on various cuts than the price ceilings on sales by hotel supply houses (meat purveyors) to eating places, but such comparisons are difficult to make because of differences in specifications.

In the case of fresh fruits and vegetables, apparently around the same volume of sales ($50,000 annually) is necessary to utilize 60-head crates of lettuce, 20-pound lugs of tomatoes, and 18-stalk crates of celery. On the contrary, less volume is necessary to buy staple groceries in case or other wholesale units because the food is storable and cases consist of smaller units that can be opened as desired. An eating place that sells only, say, $25,000 worth of meals a year would have difficulty, however, in using the No. 10 or gallon containers of many major food items. To estimate the savings possible from buying certain types of foods in large units, the published prices of three Minneapolis wholesale grocers for household and large units of foods of the same brand and type in case lots were compared. The results, which are summarized in table 15,

Table 15.- Costs per pound of staple foods purchased in household and institutional sizes, based on wholesale cost per case in Minneapolis

Food item	Comparisons made	Institutional cost as percentage of household cost 1/
	Number	Percent
Canned fruit (blackberries, peaches, pears, pineapple juice, crushed pineapple, and cherries)	7	94
Canned vegetables (wax beans, green beans, carrots, and corn)	4	93
Vegetable shortening	2	90
Mazola oil	1	81
Salad dressing	1	65
Sliced dill pickles	1	61
Olives 2/	1	40
Vinegar	1	75

1/ Based on simple average of comparisons made.

2/ The olive comparison involved a 6-ounce and a 1-gallon container and a large saving would be expected.

indicate that eating places may save as much as 6 or 7 percent if they can use No. 10 cans of fruits and vegetables and more on some other items. This margin of saving could be easily offset by waste or loss on left-overs. However, extensive use of coolers and freezers probably helps a great deal to reduce losses from spoilage and left-overs.

On the other hand, eating places pay somewhat higher prices for staple supplies bought from grocery wholesalers than do retail food stores. This fact was indicated in conversations with two wholesalers and it is substantiated by Ceiling Price Regulation No. 14, dated March 28, 1951, which specifies the maximum allowable mark-ups on cost for different classes of wholesalers, as indicated in table 16. Averages given are simple averages of the maximum mark-ups permitted for 36 types of dry-grocery items and represent the major categories.

Table 16.- Average mark-up on cost allowed by Ceiling Price Regulation No. 14, Office of Price Stabilization

Type of grocery wholesaler	Average mark-up on cost allowed
	Percent
Class 1 retailer-owned cooperative	7.7
Class 2 cash and carry	10.5
Class 3 service and delivery	13.8
Class 4 institutional	18.5

Wholesalers in classes 1, 2, and 3 may use the class 4 mark-ups on sales to eating places. The maximum mark-up for firms that specialize in sales to eating places is 4.7 percentage points above the service and delivery type of wholesaler, and many more percentage points above the maximum mark-up for the other classes of wholesalers, although there may be significant differences in the credit and delivery services involved in the other classes.

Quantity buying is less important so far as dairy products are concerned. Eating places in Minneapolis were charged 1 cent less a quart for milk delivered in bottles. This amounted to about 5.5 percent on the 18-cent house delivery price. Milk in 5-gallon containers for use in bulk dispensers is advantageous to many places. One dairy makes bulk dispensers available on a plan whereby the cost of the dispenser is gradually paid for out of the savings realized from the use of bulk milk over milk in half-pint bottles. After the dispenser is paid for, the milk is sold at the net bulk price.

Quantity buying in eggs leads to somewhat lower costs for firms with sufficient volume to buy in 30 dozen case lots and still serve reasonably fresh eggs.

Most restaurants buy bread and sandwich buns from commercial bakers. A small eating place finds it difficult to bake its own pies, cakes, and rolls and thereby loses an important feature item in drawing new business. A large place can advantageously bake these items. The most common complaint about bakery goods relates to these items. One large bakery that caters to restaurant trade stopped making pies some years ago. It indicated that pies are much better if recently baked, if they need not be made to withstand handling, and if they are not handled. This bakery said that small tea rolls also have advantages as to flavor and economy if they are made just before serving. Cakes were not discussed as objectively as this, but other opinions apparently indicate that "home-made" cakes can be made richer because they need not withstand handling.

Volume is the principal key when it comes to utilizing the lowest-cost supply agencies, but most eating places are small. In terms of the total volume of restaurant food, however, the larger places that utilize lowest-cost marketing agencies probably account for more than half of the restaurant food in most areas. In Minneapolis, 19 percent of the commercial restaurants realized 56 percent of such sales.

Effects of Economic Utilization of Food, Labor, and Other Factors by Individual Firms

Operations in eating places are so varied that discussions of the efficiency of individual firms cover many topics. Most of the literature on restaurant operation, however, was written by private restaurant consultants, and it is directed toward the ever-present theme of enabling operators to realize greater profits. To this end, consultants emphasize physical efficiency. The usual method of increasing profits is to reduce food, labor, and other costs in relation to sales rather than to boost menu prices.

This lack of emphasis on raising prices may be attributed to the competitive nature of the restaurant industry. It is common to find many individually owned establishments serving the same neighborhood. Raising prices unduly will quickly drive patrons to a nearby competitor; hence it is not usually done without great caution. High prices to the consumer as a result of monopolistic position are probably rare in the restaurant industry.

As the costs of food represent a third to a half of the cost of operating an eating place, they present the most fertile field for opportunities to increase profits. Control of food costs is a major topic of commercial literature on restaurants. Suggestions for improvements fall into three categories--standardized recipes, control of portions, and other controls over food waste. 18/

18/ See, for example, Wenzel, G. L., Wenzel's Menu Maker, 1947, Austin, Texas.

Standardized recipes are advocated by all restaurant consultants as necessary to insure good quality and to control the cost of food. Such standardized recipes are commonly called standardized formulas because they include methods for assembly, cooking, and portioning, in addition to quantities of required food. Standardized formulas contribute to more uniform products, permit greater speed and efficiency in serving food products, control the costs of the finished product to a considerable extent, and encourage better planning to reduce left-overs. They also make it possible to use relatively inexperienced employees under emergency conditions to produce dishes that conform to high standards. Disadvantages are the time required for development of the formulas and the need for close supervision of employees in their use. 19/

Commercial literature relating to control of other types of food waste is directly oriented toward using all purchased food. Of the 31 suggestions for controlling waste of food made by Wenzel, 20/ 24 relate directly to maximizing the use of purchased food and 7 relate to restricting the portions served. Maximum utilization of purchased food generally increases efficiency of eating places from the consumer and profit standpoints, and also from the standpoint of over-all conservation of resources. Such maximum utilization of purchased food might temporarily affect agricultural producers adversely by reducing their food sales to eating places, but this is doubtless a short-run problem.

An example of a relatively simple type of study of food wastes which can be adapted for use by commercial restaurants is the 3-week survey of total food purchases, kitchen trimming losses, and plate waste made at the University of Minnesota. 21/ Such surveys are apparently valuable to operators of restaurants in buying foods in most economical form, in supervising the preparation of food in the kitchen, in directing control of portions, and in judging acceptability of particular dishes by customers. They also provide useful bases for comparison with waste of food in homes.

Labor and other costs of restaurant operations are direct costs of marketing foods through the prepared-meal channel. The efficiency with which associated factors of production are utilized is therefore of primary concern in marketing food. Control of labor and other costs is closely related to control of food costs. Essentially it amounts to increasing the physical efficiency of eating-place operations. The connection between standardized recipes and efficiency of labor is illustrated by the emphasis on reducing cooking to an exact-formula science, so that when the menu is decided upon, a reference to the standard formula will prescribe the method and exact ingredients for routine execution without lost motion. Similarly, suggestions as to food costs that are related to limiting the

---

19/ Hostetler, Mary, A Study in Food Production Control. Thesis (M.A.) School of Business, University of Chicago, September 1945. (Unpublished.)

20/ Op. cit. p. 28.

21/ Described in detail in appendix G.

number of items served on any one day amount to restricting the number of different cooking operations to be performed. This is essentially work simplification.

Direct suggestions for reducing costs of labor are concerned chiefly with eliminating waste motion. Therefore they directly affect the marketing efficiency of eating places. Typical suggestions involve keeping the kitchen close to customers to avoid long walks by waitresses, providing nearby service tables for water, silver, napkins, coffee, and condiments, and providing speedy arrangements for collection of dishes. Kitchen operations can be speeded by mechanical equipment such as peeling machines, mixers, and dishwashing machines.

A primary topic in labor efficiency is the type of food service that should be provided. Lower costs of labor are generally associated with service that requires the fewest steps and the smallest amount of other services by personnel. Counter service is thus the most efficient, with cafeteria service coming next. Full table service is the most expensive. In this connection, two sets of data are available to indicate the relative costs of the various types of service.

A study by a graduate student in the Restaurant Administration Program of the University of Chicago 22/ measured the labor time and labor cost of serving customers in five different units of one large commercial eating establishment in Chicago. Results of this study indicate that as labor requirements per customer vary among the several units in the restaurant, the size of the average check varies in the same direction, although not by the exact ratio. This seems to indicate that labor is more efficient in some units than in others.

In an attempt to ascertain the relative efficiency of labor expended in each of the three types of units, the average for the entire restaurant was used as a base figure. Data in table 17 show that for each hour of labor time expended in the entire restaurant, an average of $2.62 was obtained in receipts. This figure was used to denote 100 percent or "average" efficiency. The relative efficiency of labor time in each of the three types of units was based on receipts per hour of labor in each unit. Results show that the fountain operation was most efficient in this respect, the cafeterias next, and table service the least.

Because of the different combinations of jobs in each of the units and the varying wage levels for the several types of work, the average cost per hour of labor also varies among the different units. It is

---

22/ Kirkpatrick, Russel C. A Comparative Study of Labor Costs in Cafeteria, Fountain Luncheonette, and Table Service Units in a Commercial Restaurant. Thesis (M. A.) School of Business, University of Chicago, September 1948. /Unpublished./

Table 17.- Relative efficiency in terms of labor time and labor costs in relation to receipts, in 3 types of units of 1 restaurant firm, 1948 1/

Unit	Receipts per hour of labor	Relative efficiency of labor time	Average cost per hour of labor	Labor cost as percentage of receipts	Relative efficiency of labor cost
	Dollars	Percent	Dollars	Percent	Percent
Table service	2.36	89	0.64	27	100
Three cafeterias	2.65	100	.74	28	97
Fountain lunch	3.69	139	.74	20	134
Entire restaurant	2.62	100	.71	27	100

1/ Kirkpatrick, Russel C., op. cit.

therefore important to consider also the relation between receipts and labor cost, as shown in table 17. The fountain-luncheonette type of operation uses labor most profitably. Cafeteria and table-service operations were both much lower than the fountain luncheonette in ratio of receipts to labor cost. However, these receipts do not include tips for the table-service unit. These relative efficiencies apply to the proprietor, not to the customer. Except perhaps for hotel coffee shops, counter customers do not usually leave tips and cafeteria customers rarely tip.

A second set of data relating to relative costs and efficiencies by type of service is the operating data for different types of establishments collected by the National Restaurant Association in 1940. The complete data are reproduced in appendix F. Again the counter-service operations had the lowest labor cost because less effort and time are required by employees per average customer served. Cafeterias had somewhat higher labor costs. Data for the table-service and combination table and counter-service operations are not completely comparable with the counter-service and cafeteria operations. No tips are included in the former, and therefore something less than full wages are paid. The hypothetical example in table 7 illustrates the effect of tips on labor-cost percentages. For the median of the 240 firms surveyed by the National Restaurant Association, the addition of a 10-percent tip to the menu price and to the cost of labor would result in increasing the labor-cost percentage from 27 percent of the menu prices in the above table-service establishments to 34 percent of the total menu price plus tip. Thus, total labor costs in firms with table service are considerably higher than in counter-service and cafeteria establishments.

Combination-service establishments are hybrids which reflect many factors. Including small and large places, they are the most popular types and the extent of tipping varies widely. The counter-service part tends to keep labor costs down, but table service raises them.

It is likely that an appreciable number of places with both counter and table service are of the type in which tips are not generally given for table service, and in which high labor costs for such table service are reflected in the recorded data.

Reduction of "other costs" depends upon curtailing unnecessary cost of nonfood supplies and expenses by careful supervision and maintenance. Lowering overhead costs, such as rent, interest, taxes, and insurance, is difficult. The easiest way to cope with this aspect of the problem is to increase the volume of business without increasing the physical facilities.

The amount of working capital needed in relation to volume apparently decreases somewhat as volume increases, particularly the relative amount of capital invested in inventory. This arises partly from the size of wholesale units in which some foods are bought. A small place may require a week or more to use a case of perishable food, whereas a large place may use several cases every day and may receive daily deliveries. Inventories of establishments in the case-study group increased rather slowly as size of operation increased. Inventories of four places that do more than $500,000 worth of business annually averaged only about twice as large as three places in the $100,000 group. Acceptance of frequent deliveries by large eating places amounts to shifting short- and long-term storage back to suppliers. As weekly payments are requested by many wholesalers, the large operations actually utilize considerable supplier credit. Larger volume typically increases profits, both by providing a large base for a given profit percentage and by widening the profit percentage through reduction of labor and overhead costs.

CHAPTER 7.- FOODS PURCHASED BY EATING PLACES

The kinds and quantities of food commodities which public eating places buy are important to agricultural producers and food distributors because of their increasing significance in the total food market. Quantitative information concerning this sector of the market has been virtually nonexistent. Thus a significant gap has been left in the knowledge of the structure of demand for farm food products. Therefore, data relating to purchases of all major foods during a 2-to 4-week period were collected in this pilot study from 20 public eating places in Minneapolis and 12 in Fairmont. 23/ These data are subject to serious statistical limitations because they cover only a small number of nonrandomly selected firms. But they do indicate in some measure the food-purchase patterns of restaurants in those particular cities and some idea of certain types of variations that might be expected in other parts of the country.

Minneapolis and Fairmont Case Studies

Data given in tables 18 and 21 for the Minneapolis and Fairmont establishments show wide variation in the amount of food-purchase money spent by individual firms for major groups of commodities, although some patterns in food buying of each of several major types of firms are revealed. Tables 20 and 22 provide supplementary data, with further detail. In the group of Minneapolis firms studied, proportionate expenditures for the meat, fish, and poultry food group ranged from 8.5 percent for a fountain luncheonette to 61.4 percent for a high-priced cafe that served liquor. Much of this variation is clearly associated with type of operation, as seen in table 19. Here, the percentages spent on meat, fish, and poultry as a group were arrayed in increasing order, together with a further description of each eating place. The purchase or expenditure rates of firms of similar type tend markedly to cluster. Relative expenditures for meats and for poultry were heaviest in the high-priced cafe group. Hotels also had generally high expenditures for meats, fish, and poultry, compared with the medium-priced eating places.

The proportion of restaurant food purchases devoted to dairy products (excluding butter) is materially affected by the extent of the fountain business conducted by each eating place. To a lesser extent it is affected by the consumption of cream in coffee and by general consumption of milk in the full-meal operations. Eating places that serve liquor buy relatively little milk, cream, and ice cream.

Purchases of eggs are determined chiefly by the extent of the breakfast business. The inverse relation between the proportionate expenditure for meat, fish, and poultry and that for eggs is related to the type of eating place. Steak houses, for example, spend a considerable part of their food dollar on meat, fish, and poultry. They serve few eggs, mainly because they have relatively little breakfast and short-order business. Conversely,

---

23/ One of the 13 case study firms, a medium-priced cafe, did not supply all data needed for the analysis of purchases.

many eating places which have extensive breakfast and short-order business do not spend a large percentage of their food dollar on meat, fish, and poultry. This is because they serve meat relatively less frequently and, when it is served, the portions are small or of moderate size, as in hamburgers and other sandwiches. Eating places which are relatively good markets for meat, fish, and poultry are relatively poor markets for eggs, and vice versa. The relationship does not indicate a scale of substitution of eggs for meat, fish, and poultry; rather it shows the net effects of the type of business conducted.

The pattern of purchases of fats and oils is apparently determined by the extent of baking done by the restaurant, the extent of short-order business, and the extent of deep-fat frying. The two counter-service places use relatively large quantities of fats and oils, partly for general frying and partly for short orders like toast, waffles, and pancakes. Conversely, the fountain-lunch operations use few fats and oils.

The magnitude of fruit and vegetable purchases is directly associated with the emphasis on full-meal and salad service, as in cafeterias, hotels, and department stores. Purchases of potatoes are directly related to the extent of full-meal service and to the use of potatoes for French and American frying in the short-order and steak business.

Purchases of bakery products in the finished form, as opposed to raw materials such as flour, are obviously related to the extent of baking in each eating place.

Turning to the food-purchase patterns derived from the Fairmont case studies given in tables 21 and 22, it may be seen that the percentages spent on various food groups by different eating places in Fairmont are generally more similar than in Minneapolis, apparently reflecting greater homogeneity in the eating places.

For example, nine of the eating places spent between 29 and 43 percent of their food dollar on meat, fish, and poultry. Cafe 8 (22 percent) is primarily a sandwich shop, and cafe 11 (24 percent) is a hamburger shop for which lower expenditures for the meat group are to be expected. Cafe 12 (69 percent) is a steak house for which high relative expenditures for meat are to be expected.

Proportionate expenditures for milk, cream, and ice cream are fairly similar for the two cities. Consumption of eggs shows an inverse relationship to consumption of meat, fish, and poultry for the same reasons as for the Minneapolis eating places.

The simple average purchase patterns of major groups of eating places were weighted by estimated purchases in 1948 of all places in each group in each city to estimate the (weighted) average purchase patterns for all commercial (public) eating places in Minneapolis and in Fairmont. These are compared in table 24. The totals for the major food groups are reasonably similar for the two cities but minor items vary widely.

Table 18.- Proportions of total food purchases spent for major commodity groups, by 20 Minneapolis commercial eating places, selected periods, 1950 1/ 2/

Firm No.	Meat, fish, poultry	Milk, cream, cheese, ice cream	Eggs	Fats and oils	Fruits	Vegetables (excl. potatoes)	Potatoes and sweet potatoes	Dry beans and peas	Flour (No baking unless footnoted)	Other grain products	Bread and buns	Other bakery and pastry	Refined sugar	Other syrups and sweets	Coffee and tea	Chocolate, nuts, spices, and misc.
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
	A. Cafes, high priced (1 and 2) and one medium priced serving liquor (3)															
1	56.1	11.4	2.0	7.4	2.8	8.7	1.5	---	3/1.4	1.1	1.9	---	1.1	0.3	3.2	1.1
2	61.4	6.6	1.0	6.7	2.7	9.8	4.3	---	3/ .8	.6	.2	---	.8	---	4.5	.4
3	51.3	9.3	1.9	5.0	.8	12.5	3.7	.1	.3	1.6	3.6	4.7	.6	.3	3.4	.7
Average	56.3	9.1	1.6	6.4	2.1	10.3	3.2	---	.8	1.1	1.9	1.6	.8	.2	3.7	.7
	B. Cafeterias															
4	39.1	9.8	5.1	6.4	7.3	12.6	3.4	.2	4/2.8	3.2	---	---	3.2	.4	5/4.0	2.5
5	39.3	14.8	3.5	4.7	9.4	12.2	3.8	.1	3/1.5	.9	1.7	.4	1.5	1.4	5/4.0	.8
6	33.8	12.1	3.8	12.5	8.2	9.8	4.6	.3	3/2.7	2.1	1.3	.1	2.6	1.2	4.0	.7
Average	37.4	12.2	4.1	7.9	8.3	11.5	3.9	.2	2.3	2.1	1.0	.2	2.4	1.0	5/4.0	1.3
	C. Cafes, medium priced															
7	29.8	14.2	5.2	7.9	3.0	5.7	2.4	.3	.3	1.3	6.1	14.6	.9	.6	7.7	.1
8	32.3	14.0	4.1	8.5	5.2	9.6	4.9	.1	6/1.9	1.5	3.7	5.1	2.5	1.2	4.1	1.2
9	25.6	12.6	6.0	10.6	10.0	12.6	1.0	.2	3/1.7	1.8	5.2	1.5	1.6	2.2	5.9	1.5
10	20.7	11.7	11.2	6.8	.9	1.8	1.3	.2	---	1.5	4.9	25.5	1.2	.2	12.0	.2
11	49.4	15.5	.9	3.6	5.6	9.9	2.7	.3	6/1.0	1.1	3.1	.1	1.7	.3	4.4	.4
Average	31.6	13.6	5.5	7.5	4.9	7.9	2.5	.2	1.0	1.4	4.6	9.4	1.6	.9	6.8	.7
	D. Cafes, counter service only - short order															
12	30.1	10.3	8.7	12.5	6.2	7.8	3.9	.2	3/1.7	1.1	4.4	.7	3.2	.2	7.0	1.8
13	31.1	12.7	5.7	10.9	.4	5.8	4.0	.1	.8	1.0	6.3	9.2	.4	1.1	8.8	1.6
Average	30.6	11.5	7.2	11.7	3.3	6.8	4.0	.2	1.2	1.0	5.4	5.0	1.8	.6	7.9	1.7
	E. Department stores															
14	37.7	10.7	3.8	8.3	6.4	10.6	2.3	.1	7/3.4	1.4	---	---	2.9	3.6	4.1	4.7
15	19.9	22.0	3.9	7.1	9.4	10.9	1.9	.2	3/1.3	2.0	3.1	2.4	3.5	1.4	8.7	2.2
16	35.6	11.5	2.3	7.6	4.9	8.4	3.6	.2	7/3.9	2.9	2.3	5.5	1.6	1.7	7.1	.9
Average	31.0	14.7	3.3	7.6	7.1	10.0	2.6	.2	2.9	2.1	1.8	2.6	2.7	2.2	6.6	2.6
	F. Fountain lunch															
17	19.1	26.1	3.2	4.2	11.1	8.3	1.3	---	6/---	1.6	5.1	7.4	.8	3.4	6.8	1.7
18	8.5	59.2	.4	2.2	8.0	4.1	.1	---	.2	3.2	2.9	1.9	.4	2.4	2.2	4.1
Average	13.8	42.6	1.8	3.2	9.6	6.2	.7	---	.1	2.4	4.0	4.6	.6	2.9	4.5	2.9
	G. Hotels															
19	37.6	8.4	3.6	8.2	11.5	16.1	2.4	.1	3/1.0	1.4	1.8	.5	1.0	.9	3.7	1.9
20	55.8	8.8	2.6	4.9	7.0	10.4	1.9	---	3/1.4	.8	---	.2	.8	.5	3.6	1.2
Average	46.7	8.6	3.1	6.6	9.2	13.2	2.2	---	1.2	1.1	.9	.4	.9	.7	3.6	1.6
	H. All commercial eating places in Minneapolis, weighted averages 8/															
Average	34.8	16.3	4.1	7.1	5.6	8.7	2.6	.1	1.1	1.5	3.5	5.2	1.4	1.1	5.6	1.3

1/ The percentages shown for each firm represent the distribution of the total food purchase dollar for each eating place. he percentages in each line total 100 percent except for rounding errors. If an eating place operates on a 45 percent food ost, then about $45 of every $100 of meal sales at menu prices would be spent for food. The average commercial eating place ould then spend about 34.8 percent of this $45 on meat, fish, and poultry, or about $15.66.

2/ Data for individual firms were collected in the following periods (1950 unless otherwise indicated): Firm No. 1 - wo weeks in January; No. 2 - April; No. 3 - two weeks in January; No. 4 - January; No. 5 - two weeks in February; No. 6 - wo weeks in December, 1949; No. 7 - two weeks in January; No. 8 - January; No. 9 - three weeks in May; No. 10 - two weeks n May; No. 11 - May and June; No. 12 - May; No. 13 - August; No. 14 - January; No. 15 - May; No. 16 - May; No. 17 - May; . 18 - May; No. 19 - June; No. 20 - May.

3/ Bakes pies, cakes, rolls, etc., but not bread and hamburger buns.

4/ Bakes everything in own kitchen.

5/ Estimated from percentage of establishment No. 6.

6/ Bakes pies and cakes.

7/ Bakes everything in own kitchen and resells part; resale not separate.

8/ The weighted average was computed by giving a weight to the simple averages for each of the seven groups (A through G) ual to the estimated food purchases of all commercial eating places in Minneapolis for the types of establishments most osely corresponding to the groups. The weights consist of estimated purchases of the commercial eating places listed in able 26, and are as follows (in thousands of dollars): A- 3,635; B - 1,153; C - 7,446; D - 2,214; E - 1,243; F - 2,880; nd G - 1,462. The sum of these weights is $20,033,000. This system intentionally omits estimated purchases of $5,386,000 f private eating places listed in table 26.

Table 19.- Array of percentages of food purchases spent on meat, fish, and poultry by 20 Minneapolis eating places, selected periods, 1950

Percentages spent for meat, fish, and poultry	Firm No. from table 18	Type of eating place and comments
Percent		
8.5	18	Ice cream fountain serving soup, sandwiches, and hot dishes to students. High expenditures for dairy products and sweets.
19.1	17	Drug store fountain-lunch serving full meals. High expenditures for dairy products and sweets.
19.9	15	Department store fountain luncheonette serving noon meals and snacks. High dairy ratio.
20.7	10	Medium-priced cafe serving primarily breakfasts, noon plate lunches, and many snacks with coffee. Open 4:00 a. m. to 2:00 p. m. Note highest egg, bakery, and coffee ratios in entire list, and low fruit and vegetable ratio.
25.6	9	Medium-priced cafe in office building.
29.8	7	Medium-priced cafe, moderate coffee and snack business.
30.1	12	Counter service, short-order meals (hamburgers, pork chops, minute steaks, etc.)
31.1	13	Counter service, short-order meals (hamburgers, pork chops, minute steaks, etc.)
32.3	8	Medium-priced cafe in office building.
33.8	6	Cafeteria (medium priced). High fats and oils due partly to French frying.
35.6	16	Department store - several types of operations.
37.6	19	Hotel - no liquor and relatively little emphasis on steak.
37.7	14	Department store - several types of operations.
39.1	4	Cafeteria.
39.3	5	Cafeteria.
49.4	11	Medium-priced cafe, primarily noon and evening meals, not open for breakfast (low egg ratio).
51.3	3	Medium-priced cafe with bar. Many steaks, and little breakfast (low egg ratio).
55.8	20	Hotel - large operation with liquor and banquets.
56.1	1	High-priced cafe with high quality meats of all types emphasized.
61.4	2	High-priced cafe with bar. Many steaks and no breakfasts.
34.7 - Median		
35.7 - Simple average		
34.8 - Weighted average		

Table 20.- Proportions of total food purchases spent for selected major commodities by 20 Minneapolis commercial eating places, selected periods, 1950

Firm No.	Meat, fish, and poultry			Fruits				Vegetables		
	Beef, pork, veal, lamb	Fish	Poultry	Fresh	Canned	Frozen	Dried	Fresh	Canned	Frozen
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
	A. Cafes, 2 high-priced, and 1 medium-priced serving liquor									
1	40.3	7.1	8.7	1.4	0.4	0.9	0.1	5.9	2.3	0.5
2	37.4	10.0	14.0	.7	1.5	.4	.1	5.2	3.7	.9
3	40.1	6.0	5.2	.7	.1	---	---	4.3	8.2	---
verage	39.3	7.7	9.3	.9	.7	.4	.1	5.1	4.7	.5
	B. Cafeterias, medium-priced									
4	26.3	2.0	10.8	4.4	.6	.8	1.5	6.6	4.7	1.3
5	34.5	1.9	2.9	2.1	5.4	1.7	.2	6.9	4.9	.4
6	25.0	2.4	6.4	3.8	2.2	1.9	.3	4.9	4.8	.1
verage	28.6	2.1	6.7	3.4	2.7	1.5	.7	6.1	4.8	.6
	C. Cafes, medium-priced									
7	26.3	2.4	1.1	.6	.8	1.6	---	1.0	4.5	.2
8	30.0	1.5	.8	.6	2.6	1.2	.8	6.3	2.9	.4
9	18.3	2.2	5.1	2.3	2.8	4.8	.1	2.8	9.2	.6
10	19.8	.2	.7	---	.2	.7	---	.4	1.4	---
11	39.5	4.9	5.0	1.6	4.0	---	---	2.1	7.8	---
verage	26.8	2.2	2.6	1.0	2.1	1.6	.2	2.5	5.2	.2
	D. Counter service									
12	28.0	.8	1.3	1.8	1.8	2.6	---	4.5	3.3	---
13	30.8	.2	.1	.1	.3	---	---	1.9	3.9	---
verage	29.4	.5	.7	1.0	1.0	1.3	---	3.2	3.6	---
	E. Department stores									
14	16.4	15.6	5.7	2.2	2.6	.9	.7	4.0	2.5	4.1
15	13.6	2.6	3.7	1.8	4.0	3.7	.9	4.8	5.0	1.1
16	20.2	11.4	4.0	1.5	3.0	.1	.3	4.9	2.6	.9
verage	16.7	9.8	4.5	1.8	3.2	1.5	.6	4.6	3.4	2.0
	F. Fountain lunch									
17	15.9	.7	2.5	6.9	1.9	2.3	---	3.4	4.8	.1
18	6.7	.5	1.3	2.0	4.3	1.7	---	2.4	1.7	---
verage	11.3	.5	1.9	4.5	3.1	2.0	---	2.9	3.2	.1
	G. Hotels									
19	26.0	8.6	3.0	4.8	4.4	2.2	.1	4.7	6.5	4.9
20	38.3	6.8	10.7	3.8	2.9	.3	---	4.9	2.9	2.6
verage	32.2	7.7	6.8	4.3	3.6	1.2	.1	4.8	4.7	3.7
	Weighted average 1/									
verage	27.0	3.6	4.2	1.9	2.1	1.4	.2	3.6	4.5	.6

1/ See footnote 8, table 18 for method used.

Table 21.- Proportions of total food purchases spent for major commodity groups by 12 Fairmont commercial eating places, October 1950, and weighted averages for all commercial eating places in Fairmont 1/

Firm No.	Meat, fish, poultry	Milk, cream, ice cream, cheese	Eggs	Fats and oils	Fruits	Vegetables	Potatoes	Dry beans, peas	Flour	Other grain	Bread and buns	Other bakery	Sugar	Other sweets	Coffee and tea	Nuts, chocolate, spices and miscellaneous
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
A. Hotels																
1	39.7	14.2	2.9	9.1	4.8	7.1	0.7	0.1	0.7	1.1	2.7	4.7	1.7	0.6	7.8	1.8
2	37.1	8.0	4.3	8.0	9.8	12.0	.8	---	.3	1.5	2.4	3.1	.8	3.0	7.5	1.3
Average	38.4	11.1	3.6	8.6	7.3	9.6	.8	.1	.5	1.3	2.6	3.9	1.3	1.8	7.7	1.6
B. Cafes, medium-priced																
3	34.0	15.8	4.0	7.4	3.2	8.2	2.4	---	.4	.8	4.8	7.6	1.4	.2	9.0	.6
4	42.8	18.7	3.3	6.2	1.4	5.3	2.4	---	.1	1.3	3.5	9.2	.2	.9	4.0	.6
5	41.0	13.4	4.3	9.1	2.0	2.9	2.3	---	.9	.4	3.0	10.1	1.1	.3	8.6	.7
6	31.9	21.4	1.5	6.4	7.6	6.7	1.6	---	4.4	1.3	2.9	1.4	2.3	3.3	6.1	1.0
7	28.6	21.6	3.8	7.0	3.1	6.8	1.6	---	1.1	.3	3.9	4.7	2.1	2.3	12.5	.4
8	22.0	21.4	4.4	6.0	1.1	2.2	1.4	---	.6	.8	4.5	17.9	1.5	---	16.0	---
9	35.4	22.3	3.4	7.5	4.3	7.8	2.4	---	.6	.6	3.9	3.4	1.2	.1	5.8	1.1
10	40.2	19.0	3.8	4.7	3.4	5.1	1.0	.1	1.0	1.6	5.2	5.6	1.6	.4	6.7	.4
Average	34.5	19.2	3.6	6.8	3.3	5.6	1.9	.1	1.1	.9	4.0	7.5	1.4	1.1	8.6	.7
C. Hamburger shop																
11	24.4	21.1	5.1	4.3	2.3	9.9	.3	---	---	.6	8.6	15.7	.5	1.1	5.1	.9
D. Steak house																
12	69.4	5.7	.6	6.0	.3	7.2	1.9	---	.1	.2	2.4	.1	.4	---	5.4	.2
E. All commercial eating places in Fairmont, weighted average 1/																
Average	34.7	2/19.5	3.5	6.5	3.4	6.5	1.5	.1	.9	.9	4.2	7.4	1.2	1.1	7.8	.8

1/ The simple averages of the proportions of total food expenditures spent for major food groups by the four categories of eating places were weighted by estimated total food expenditures (or purchases) of all firms in each category in city to derive the weighted averages for entire commercial eating place industry.

2/ Includes estimated purchases of two ice cream fountains not in actual case studies. Their purchases were arbitrarily considered to be 100 percent milk, cream, cheese, and ice cream.

Table 22.- Proportions of total food purchases spent for selected major commodities by 12 Fairmont commercial eating places, October 1950, and weighted average for all commercial eating places in Fairmont

Firm No.	Meat, fish and poultry			Fruits				Vegetables		
	Beef, pork, veal and lamb	Fish	Poultry	Fresh	Canned	Frozen	Dried	Fresh	Canned	Frozen
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
	A. Hotels									
1	32.1	1.5	6.1	1.9	2.6	0.4	---	1.9	4.3	0.9
2	33.3	1.8	2.0	---	9.0	.7	.1	1.7	9.2	1.1
Average	32.7	1.6	4.1	.95	5.8	.55	.05	1.8	6.8	1.0
	B. Cafes, medium-priced									
3	30.4	1.2	2.4	.5	1.0	1.7	---	4.4	3.8	---
4	32.0	.6	10.2	.2	1.2	---	---	1.2	4.1	---
5	35.8	1.3	3.8	.9	.9	.3	---	1.5	1.4	---
6	24.0	1.3	6.6	3.7	1.6	2.3	---	1.9	4.8	---
7	26.2	1.9	.5	---	2.6	.5	---	1.9	4.9	---
8	21.9	.1	---	.5	.6	---	---	1.1	1.2	---
9	34.0	1.4	---	1.5	2.7	---	.2	2.9	4.8	---
10	37.5	.8	1.9	.8	2.3	---	.3	.8	4.3	---
Average	30.2	1.1	3.2	1.0	1.6	.6	.06	1.9	3.7	---
	C. Hamburger shop									
11	24.4	---	---	.4	1.9	---	---	2.2	7.7	---
	D. Steak house									
12	59.1	5.0	5.3	.2	.1	---	---	4.1	3.1	---
	E. All commercial eating places in Fairmont, weighted average 1/									
Average	30.6	1.2	2.9	.9	2.0	.5	.04	2.0	4.4	.1

1/ The simple averages of the proportions of total food expenditures spent for major food groups by the four categories of eating places were weighted by estimated total food expenditures (or purchases) of all firms in each category in city to derive the weighted averages for entire commercial eating place industry.

Table 23.- Estimated proportions of total food purchases allocated to major commodities by commercial eating places in Minneapolis and Fairmont 1/

Food group	Proportion of total food purchases	
	Minneapolis	Fairmont
	Percent	Percent
Meat, fish, and poultry - total	34.8	34.7
Beef, pork, veal, and lamb	27.0	30.6
Fish	3.6	1.2
Poultry	4.2	2.9
Milk, cream, cheese, ice cream	16.3	19.5
Eggs	4.1	3.5
Fats and oils	7.1	6.5
Fruit - total	5.6	3.4
Fresh	1.9	.9
Canned	2.1	2.0
Frozen	1.4	.5
Dried	.2	.04
Vegetables - total	8.8	6.6
Fresh (excluding potatoes)	3.6	2.0
Canned	4.5	4.4
Frozen	.6	.1
Dry beans and peas	.1	.1
Potatoes	2.6	1.5
Grain products - total	11.3	13.4
Flour	1.1	.9
Other grain products	1.5	.9
Bread and buns	3.5	4.2
Other bakery	5.2	7.4
Sugar and other sweets	2.5	2.3
Coffee and tea	5.6	7.8
Nuts, chocolate, spices, and miscellaneous	1.3	.8
Total	100.0	100.0

1/ From tables 18, 20, 21, and 22.

Table 24.- Comparison of estimates of proportions of total food purchases allocated to major commodity groups by eating places in the Minneapolis survey with similar data from several other studies

Commodity	Minneapolis survey				Wenzel 1/	Dahl and Breland 2/		Seiler 3/			Palmer
	6 medium-priced cafes	3 cafeterias	2 high-priced cafes	2 hotels		Cafeteria	Hotel	Combination table, cafeteria and counter service	Moderate-priced table service	High-priced table service	College dining hall 4/
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Meats	29.0	28.6	38.9	32.2	24.0	22.2	24.5				
Poultry	3.0	6.7	11.4	6.8	12.0	4.8	10.5				
Sea food	2.9	2.1	8.5	7.7	8.0	5.0	7.0				
Eggs	4.9	4.1	1.5	3.1	4.5	7.5	2.0				
Subtotal	39.8	41.5	60.3	49.8	48.5	39.5	44.0	55.3	57.5	64.2	5/ 30.0
Fruits and vegetables	3.8	9.5	6.6	9.1	16.0			6/ 17.8	6/ 6.8	6/ 12.0	
Potatoes	2.7	3.9	2.9	2.2	2.0	25.1	18.0				23.0
Groceries	7/ 9.3	7/ 10.5	7/ 5.4	7/ 13.3	8/ 12.0			9/ 4.6	9/ 3.3	9/ 7.0	
Cooking oil					---	3.0	2.0				
Butter	7.1	7.9	7.0	6.6	5.5	6.8	5.0				10.0
Milk and cream					5.0	10.8	7.0	10.0	10.4	6.3	
Ice cream	12.9	12.2	9.0	8.6	2.0	.5	3.0				19.8
Cheese					1.0						
Pies, cakes and other pastry	8.6	.2	---	.4	3.0						
Bread and rolls	4.4	1.0	1.0	.9	3.0	6.5	9.0	3.8	7.0	3.6	7.8
Cereals	10/ 2.4	10/ 4.4	10/ 1.9	10/ 2.3		.2	.3				
Coffee and tea	6.2	4.0	3.8	3.6	2.0	1.8	3.0				11/ 5.0
Sugars and syrups	2.2	3.4	1.2	1.6		3.0	1.1	8.5	15.0	6.4	4.3
Miscellaneous	.7	1.3	.8	1.6		2.8	7.6				---
Total	100	100	100	100	100	100	100	100	100	100	100

1/ Wenzel, G. L., Wenzel's Menu Maker, 1947, p. 16 (apparently pre-1941 data).

2/ Dahl, J. O. and Breland, J. H., Food Standards Handbook for Quantity Cookery, Gold Book No. 100, Stanford, Connecticut, p. 52, as reproduced in Seiler report, see footnote 3.

3/ Seiler, William G., A Survey of the Distribution of Food Expenditures as a Basis for Food Cost Control in Three Restaurants, Thesis (M.A.), School of Business, University of Chicago, December, 1947. Simple averages of July and October, 1946 data given in the report.

4/ Palmer, Clara E., The Trained Dietician in College Food Service, Thesis (M.A.) Iowa State College, as reproduced in Seiler report, see footnote 3.

5/ Includes cheese, estimated by Wenzel at 1.0 percent.

6/ Includes fresh and frozen fruits and vegetables.

7/ Canned, frozen, and dried fruits and vegetables.

8/ Includes canned fruits and vegetables, fats and oils except butter, and dry items such as flour, cereals, sugar, and dried fruits and vegetables.

9/ Includes only canned fruits and vegetables.

10/ Includes flour and other grain products.

11/ Includes coffee, tea and miscellaneous items.

Additional Data on Purchase Patterns

Distributions of food purchases of public eating places by value have been computed by others. Several of these are summarized in table 24. Wenzel's 24/ data are prewar, and the Palmer 25/ and Dahl and Breland 26/ data are probably prewar also. Totals for the major category of meats, poultry, sea food, and eggs vary widely but they are apparently not inconsistent. Proportionately large expenditures for meat by high-priced places are typical, as in Minneapolis. College dining halls had the highest expenditures for milk, cream, and ice cream relative to total expenditures and the lowest expenditures for meat, poultry, fish, and eggs. Other categories reveal considerable variation among the different studies, although probably no greater variation than was observed among widely different types of establishments in Minneapolis.

The Seiler report 27/ contains food-cost distributions by six groups for each of three places in July and October 1946. The data are presented in table 25. They show relatively little seasonal variation.

Table 25.- Seiler data on proportions of total food purchases allocated to six groups of foods, 1946

Type of establishment	Month surveyed	Percentage of total food purchases						Total food cost as percent of sales
		Meat, sea food, poultry, eggs	Dairy, incl. butter	Fruits and vegetables		Cereals	Beverages, sugar, fats, misc.	
				Fresh and frozen	Canned			
		Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
A: Combination table, cafeteria, and counter service, moderate-priced	July	54.5	8.0	20.6	5.2	4.2	7.5	55.9
	Oct.	56.1	11.9	15.1	3.9	3.5	9.5	56.4
B: Table service, moderate priced	July	59.6	9.8	6.3	2.2	6.9	15.2	39.3
	Oct.	55.4	11.1	7.2	4.4	7.1	14.8	42.4
C: Table service, high-priced	July	65.5	6.2	13.2	6.9	3.8	4.6	55.3
	Oct.	63.0	6.4	11.9	7.1	3.5	8.1	56.4

24/ Wenzel, G. L., Wenzel's Menu Maker, 1947, p. 16 (pre-1941 data).

25/ Palmer, Clara E., The Trained Dietitian in College Food Service. Thesis (M.A.), Iowa State College, unpublished as reproduced in Seiler report, see footnote 27/

26/ Dahl, J. O., and Breland, J. H., Food Standards Handbook for Quantity Cookery, Gold Book No. 100, Stanford, Conn., p. 52, as reproduced in Seiler report, see footnote 27/.

27/ Seiler, Wm. G., "A Survey of the Distribution of Food Expenditures as a Basis for Food Cost Control in Three Restaurants," Thesis (M.A.), School of Business, University of Chicago, December 1947. Average of July and October 1946 data.

Total Food Purchases of All Eating Places in Minneapolis and Fairmont

When distributions of purchases of major foods by public eating places in Minneapolis and Fairmont were estimated, a second step was to develop an approximation of total food purchases of all types of eating places, public and private, and to break out certain categories for use in comparison with patterns of food purchases for home consumption.

In brief, the procedure was as follows. Information as to the number of firms and sales of eating places in Minneapolis in terms of 21 types of establishments serving meals was assembled from census data, case studies, and other sources, as indicated in table 26. These totals were combined into seven groups with similar purchase patterns and other common characteristics identified in the case studies. The percentages spent for food by each group, as estimated from the case studies, were applied to total sales to derive approximations of total expenditures for food by each group of establishments, excluding candy and alcoholic beverages. 28/ These purchases of food were further distributed into three groups of foods which correspond to the analysis of merchandise-lines of food-group stores: meat, fish, and poultry; fresh fruits and vegetables; all other foods (table 27).

A similar method was used to estimate the value of purchases of three groups of foods by all Fairmont eating places, which are given in table 28.

Distributions of food purchases by the eating-place industry, including both private and public establishments, in terms of these three categories of foods can be compared with estimates derived from census data on retail food-store sales in Minneapolis, Fairmont, and the United States, with results of a small sample study of family food purchases in Minneapolis-St. Paul in the winter of 1948, 29/ and with United States average disappearance per capita for 1948, as given in table 29.

Percentages of the total supply of three groups of foods that were marketed through eating places, which are described in chapter 9, indicate that eating places in Minneapolis represented about 22 percent of the total commercial market for meat, sea food, and poultry; about 15 percent

---

28/ All computations for Minneapolis and Fairmont have excluded sales of candy products and alcoholic beverages in eating places. Although these commodities are made from farm products, are sold in eating places, and are often consumed on the premises, they are not included in this analysis because they represent different types of food. The exclusion is primarily due to limitations on the scope of this study. One difficulty, however, arises out of the fact that much of the candy bought in eating places is not consumed on the premise, although it probably is consumed away-from-home rather than at home.

29/ U. S. Dept. of Agriculture, Bureau of Human Nutrition and Home Economics, Family Food Consumption in Minneapolis-St. Paul, Minnesota, Winter 1948, Preliminary Report No. 2, table 4, page 9.

Table 26.- Estimation of food purchases of all eating places in Minneapolis, 1948

Type of eating place	Eating places	Meal and fountain sales 1/	Estimated food cost as percentage of sales 2/	Estimated food purchases: Group total	Estimated food purchases: Percentage of city total
	Number	1,000 dollars	Percent	1,000 dollars	Percent
Group A					
Cafes serving alcoholic beverages, including high-priced cafes, large stores and multiunits	20	3,901			
Drinking places	3/ 175	3,472			
Private clubs 4/	21	2,800			
Total		10,173	49.3	5,015	19.7
Group B					
Cafeterias, large and multiunits	5	2,303			
Cafeterias, small	6	282			
YWCA and other institutional cafeterias 4/	3	300			
Employee lunchrooms 4/	52	520			
Boarding houses 4/	75	840			
Other school and college restaurants 4/	7	300			
Subtotal		4,545	44.6	2,027	
School lunch program 4/	---	570	54.0	308	
University of Minnesota dormitories and restaurants 4/	6	1,350	48.3	652	
Fraternities and sororities 4/	65	5/ 684	5/ 50	342	
Hospitals 4/	33	5/ 3,660	5/ 50	1,830	
Subtotal		6,264		3,132	
Total		10,809	47.7	5,159	20.3
Group C					
Cafes, medium-priced and caterers, large stores and multiunits	106	9,394			
Cafes, medium-priced, primarily small single unit stores	280	6,964			
Bowling alley cafes	15	300			
Total		16,658	44.7	7,446	29.3
Group D					
Lunch counters and stands	195	5,272	42.0	2,214	8.7
Group E					
Department stores	5	2,272	54.7	1,243	4.9
Group F					
Variety stores	7	956	6/ 47.0		
Drug store fountains	211	5,171			
Total		6,127	47.0	2,880	11.3
Group G					
Hotels	15	3,464	42.2	1,462	5.8
City total		54,775	7/ 46.4	25,419	100.0

1/ Based on Census data for sales of commercial eating places and original data for private establishments collected for this study.

2/ Simple averages from case studies for closely corresponding types of establishments.

3/ Drinking places serving meals estimated at 41 percent of all drinking places, based on the ratio for those drinking places analyzing sales.

4/ These eating places are essentially private and were not considered in computing the weighted averages in the last line of table 18.

5/ Rough approximation derived from food cost data which were estimated directly from adequate sample data.

6/ No direct data available as the local chain variety stores refused to provide any data; 47 percent was used, based on general similarity to the fountain lunch operations, both of which were chain managed.

7/ This estimate of the average food cost ratio for all Minneapolis eating places in 1948 was derived from total sales and total food purchases. It differs slightly from the 43.7 percent estimated for 1949 and given table 12.

of the market for fresh fruits and vegetables; and about 16 percent of the market for all other foods. The proportion of Fairmont's total supply of meat which was marketed through eating places was about 21 percent. This was appreciably higher than the 16.5 percent of all foods marketed through eating places.

Table 27.- Estimation of purchases of selected food groups, all eating places, Minneapolis, 1948 1/

Group of establishments	Total food purchases (commercial and private)	Estimated purchases					
		Meat, fish and poultry		Fresh fruits and vegetables, potatoes, and sweetpotatoes		Other foods 2/	
		Proportion of food purchases	Purchases	Proportion of food purchases	Purchases	Proportion of food purchases	Purchases
	1,000 dollars	Percent	1,000 dollars	Percent	1,000 dollars	Percent	1,000 dollars
A	5,015	56.3	2,823	9.2	461	34.5	1,731
B	5,159	37.4	1,929	13.4	691	49.2	2,539
C	7,446	31.6	2,353	6.0	447	62.4	4,646
D	2,214	30.6	677	8.2	182	61.2	1,355
E	1,243	31.0	386	9.0	112	60.0	745
F	2,880	13.8	397	8.1	233	78.1	2,250
G	1,462	46.7	683	11.3	165	42.0	614
Total	25,419	36	9,248	9	2,291	55	13,880

1/ Based on food-purchase patterns for the seven groups of commercial eating places developed in table 18 and estimated total food purchases as derived in table 26.

2/ Computed as a residual.

Comparison of the patterns of purchases in retail food stores and in public eating places supplies a missing link in the analysis of differences between estimates of the rates of consumption of certain major foods, based on surveys of family purchases of food and national averages of per capita consumption of food. These data indicate that relatively more meat, poultry, and fish, but less fresh fruits and vegetables are consumed in eating places than in private households. Emphasis in eating places on consumption of food by adults, particularly by men, and the larger portions and higher-priced cuts of meat in the high-priced establishments probably are the significant factors in this pattern from the standpoint of demand for major foods. If this pattern continues and if consumption in public eating places increases proportionately to the total, demand for foods in the meat, poultry, and fish category might accelerate but the converse might be expected for fresh fruits and vegetables.

Table 28.- Meal and fountain sales and estimated purchases of food, all eating places, by three food groups, Fairmont, 1948 1/

Type of eating place	Meal and fountain sales	Total	Food purchases					
			Meat, fish, and poultry		Fresh fruits and vegetables		Canned goods and other groceries	
			Purchases	Percentage of total food purchases	Purchases	Percentage of total food purchases	Purchases	Percentage of total food purchases
	1,000 dol.	1,000 dol.	1,000 dol.	Percent	1,000 dol.	Percent	1,000 dol.	Percent
Hotels and steak house	111	63	30	48	3	4	30	48
Medium-priced cafes and variety-store luncheonette	509	292	101	34	14	5	177	61
Lunch counters, drug stores, taverns, etc.	109	53	13	24	1	2	39	74
Hospital 2/	2/40	20	7	35	1	5	12	60
Total	769	428	151	35	19	5	258	60

1/ Estimates of food sales and purchases for all eating places are based on reported data for case-study firms and detailed estimates for other firms. Case studies covered all major types and three-fifths of total sales. Estimates check closely with available census data.

2/ The purchase total is as reported, but the sales value is hypothetical because meals are not sold separately. Distribution by food group was made on the basis of that for medium-priced cafes.

Table 29.- Estimated proportions of total food purchases allocated to 3 food groups by eating places, by consumers in retail food stores, and by selected Twin City families, and for all United States

Item	Estimated proportions of total food purchases allocated to		
	Meat, fish, poultry	Fresh fruits, vegetables, and potatoes	All other food
	Percent	Percent	Percent
Purchases by eating places			
All Minneapolis eating places, from table 27	36	9	55
All Fairmont eating places, from table 28	35	5	60
Wenzel data from table 24	44	18	38
Dahl and Breland - cafeteria, from table 24	32	1/	1/
Dahl and Breland - hotel, from table 24	42	1/	1/
Sales by retail food stores, 1948 2/			
Minneapolis	29	11	60
Fairmont	26	9	65
United States	27	10	63
St. Paul - Minneapolis family food purchases 3/	26	11	63
Total U. S. civilian food, 1948 4/	30	13	57

1/ Available data were not sufficiently detailed to compute these categories.

2/ Derived from Census of Business, 1948.

3/ "Family Food Consumption in Minneapolis - St. Paul, Minnesota, Winter 1948". Preliminary Report No. 2, table 4, page 9.

4/ Quantities consumed per capita in 1948 times 1935-39 average retail prices adjusted to 1948 values by means of BAE index of urban and rural retail food prices.

CHAPTER 8.- AVERAGE QUANTITIES OF MAJOR FOODS CONSUMED PER PERSON PER WEEK IN FIVE TYPES OF MINNEAPOLIS PUBLIC EATING PLACES

Rates of per capita consumption of food in public eating places are important in ascertaining the extent to which the away-from-home market for food is similar to or different from the home market for food. If these rates differ to any appreciable extent, changes in the proportion of food marketed through public eating places would probably affect the total demand for all food products and for specific products.

Estimates of the rates of consumption of food in several types of public eating places in Minneapolis, derived through the methods described below, can be regarded only as very rough approximations. 30/ However, they furnish some tentative indications of differences in rates of consumption of individual foods. If verified by further investigation and found to be generally applicable, these differences will have considerable significance for analysis of the demand for farm food products.

Per capita rates of consumption for meats, poultry, fish, fats and oils, potatoes, frozen vegetables and fruits in the 14 public eating places in Minneapolis from which detailed data were collected were in most cases significantly higher than rates of consumption in the Minneapolis-St. Paul family households surveyed by the Bureau of Human Nutrition and Home Economics in the winter of 1948. 31/ If these differences should prove to be general in other areas, they would explain in large part why the averages of home consumption of these foods reported in the 1935-36 and 1942 surveys ran lower than the national averages derived from food-disappearance data. 32/ The observed higher rates of consumption of meat, poultry, and fish in eating places are not at all surprising because these foods are used for the main dish in meals eaten out by most adults and are one of the major attractions in restaurant eating. This factor of large consumption in eating places has contributed materially to the relatively strong demand for these products in recent years.

30/ Their limitations are discussed further in a later section of this chapter.

31/ Family Food Consumption in Minneapolis-St. Paul, Minnesota, Winter, 1948. Preliminary Report No. 2, U. S. Department of Agriculture, Bureau of Human Nutrition and Home Economics. December 20, 1948. Washington, D. C.

32/ For description of these data see Consumption of Food in the United States, 1909-48, U. S. Department of Agriculture, Misc. Pub. No. 691. Washington, D. C., 1949.

Differences in the amount of breakfast business, buying practices for baked goods, and adjustment for coffee and between-meal snacks, which are described below, materially affect the rates of consumption of eggs. When these factors are taken into account, consumption of eggs in eating places surveyed apparently averages somewhat higher than household consumption, as measured by the Minneapolis-St. Paul data for winter 1948.

Use of fats and oils in the eating places studied is much higher than in the family households covered in the sample survey by the Bureau of Human Nutrition and Home Economics. It is also higher than the national average. In addition to extensive ordinary frying, the popularity of deep-fat frying of potatoes, fish, chicken, and several other foods is directly related to this higher rate of consumption. Accordingly, the importance of this industry in the marketing of fats is immediately apparent.

The popularity in public eating places of foods fried in deep fat materially affects the rates of consumption of fried foods as well as that of fat. With the modern deep-fat frying equipment in use, French fries are emphasized with short orders. Moreover, potatoes are a standard item in the complete meals of most restaurants. The substantially and consistently higher rate of use in the public eating places surveyed than in home use or the national average is significant to producers and marketers of potatoes. The rate of civilian per capita consumption of potatoes for the country as a whole has decreased almost 50 percent in the last 40 years.

The seasonality of consumption of fresh fruit prevents drawing even tentative conclusions from the case-study data, particularly as the data were collected at different times in the year. But a review of the buying and management practices of restaurateurs described in chapter 4 supports the hypothesis that consumption of fruit in popular-priced eating places, other than cafeterias, may be much lower than home consumption. Frozen fruits are a striking exception and this might indicate an area for further development.

The problem of seasonality also interferes considerably with comparisons of rates of use of vegetables by the public eating places surveyed with those of households, or with the national averages, which are simply one-fifty-two-hundredths of the annual averages. But weekly rates of use or consumption of fresh vegetables in the several types of eating places differ substantially. For the higher-priced cafes and cafeterias they run substantially higher than in the sampled households, although their timing is fairly comparable. Use of both fresh and processed vegetables by the hotels was quite high, even though they were studied in May and June.

Consumption of foods processed from grains in the 14 public eating places in Minneapolis apparently reflects the extent of the sandwich business, the emphasis on pastries, and the inclusion of bread with meals. The rates of consumption of flour and cereals in various forms apparently run a little above the rate in Minneapolis-St. Paul homes. The national average is also influenced by high consumption of grain products in rural areas.

The figures for sugar which exclude the sugar content of soft drinks, candy, and other confections apparently indicate a rate of use in eating places which might average about the same as that of winter use in Minneapolis-St. Paul households. But inclusion of these sweets and soft drinks and the addition of ice cream consumed in establishments that specialize in ice cream probably would raise the eating-place rates above the average household rate derived from the sample data.

Omission of establishments that specialize in ice cream and dairy products, which are quite popular in Minneapolis, prevents even rough generalizations from a comparison of the consumption rates of dairy products in the firms surveyed with those in households.

The basic problem of determining consumption rates is epitomized in the data on coffee and tea, both in homes and in eating places. Between-meal cups of coffee are not counted as separate meals in calculations made by the Bureau of Human Nutrition and Home Economics nor in the adjusted estimates for the 14 public eating places. If people not eating "main meals" participated, the rate per person per week is inflated; if not, the between-meal coffee is included with that used at meals and the weekly averages are approximately correct.

Methodology

Detailed data were collected from 14 of the public eating places in the Minneapolis group of case studies for the purpose of estimating the rates of per capita consumption of major foods in eating places. These data consisted of beginning and ending inventories of the staple items and of other foods not bought daily, the quantities and values of all foods bought during the test period, and information as to the number of persons served.

By adding beginning inventories to purchases and subtracting ending inventories, the quantities and values of all foods used in the period were derived. The fresh-meat items were converted from wholesale weights to equivalent retail weights for comparison purposes, by means of conversion factors assembled by the Department of Agriculture, supplemented by local trade estimates in some instances.

The number of persons served was obtained from regular customer-count records, from cash-register tapes, and from actual guest checks for the period. Complete customer-count data were available in 11 of the 14 places, and sample analyses of guest checks for at least a third of the period were made in the three remaining places. The sample analyses were associated with complete cash-register data so that the estimates of total customer count for the period are reasonably accurate.

When the basic data were ready for analysis, serious conceptual problems were encountered in estimating and interpreting possible estimates of the rates of food consumption in eating places. These arose from the composite and variegated nature of the industry. Some establishments cater to clientele who eat most of their meals in the same places. These present no particular problems. Others specialize in lunch and snack business. Here real difficulties arise in deriving per capita rates of consumption. Is a between-meal snack or a cup of coffee a meal? Should the quantities of food consumed mostly at lunch be multiplied by 3 to derive a day's total or by 21 to get a weekly rate?

Two approaches to these problems were used, which might be described as "unadjusted" and "adjusted." The first method was to divide the total quantities of food used by the number of meals served, that is, customers served, then to multiply the resulting per meal rate by 21 to arrive at an estimate of per capita consumption per week (tables 30 and 31).

Per capita consumption per week was used as the basic unit because it was convenient to use a period longer than one day for the adjustments involved in tables 32 and 33, and because the Minneapolis-St. Paul family food consumption data were set out in this way.

The unadjusted rates of per capita consumption for food for each restaurant were added together and divided by the number of firms in the category to derive the averages shown in table 30. For comparison, the table also includes estimates of per capita consumption of the same foods for the entire United States (1949 weekly averages in terms of retail weight) and estimates of per capita food consumption in a small sample of family households in Minneapolis and St. Paul in the winter of 1948.

Difficulties in comparing a few items as noted on table 30 were overcome in the adjustments shown in table 31. The data in table 31 on a "distributed basis" are similar to the data in table 30, except that purchased bakery items, salad dressings, and certain other foods such as jams and preserves, dessert powders, and fountain sirups, were analyzed by major ingredients and these ingredients were added to the comparable major food categories. There are two reasons for this distribution. The first is that some apparently significant differences in the "as purchased" quantities in table 30 are due merely to the fact that some restaurants do their own baking, mix their own salad dressings, and make desserts from basic ingredients, whereas others do not. The second is that comparisons with the national consumption rates are facilitated by such distributions.

The unadjusted rates of per capita consumption in eating places given in table 31 still are not strictly comparable with the national averages because of certain conceptual differences. Every food check was considered a meal check, or one-third of a person's daily consumption. As some eating places serve many coffee customers, such meal counts would be inflated. Contrariwise, the high-priced cafes and hotels serve many elaborate dinners, and these dinners no doubt constitute more than one-third of the daily food consumption of such customers.

In order to obtain consumption rates that represent so far as possible the same basic consumption phenomena as those measured by the national per capita data and the Minneapolis-St. Paul family-household data, several types of statistical adjustments were made. These relate to (1) the exclusion of coffee customers from the customer or meal count, and (2) the number of meals that were considered as equivalent to one week's total consumption of food at the various eating places. Details of the adjustment process represent one attempt to compensate for below-average and above-average content of meals.

These details follow. For the above-mentioned "coffee-customer" adjustment, a meal was defined as any order of food costing more than the price of coffee and two doughnuts. The number of customers who bought snacks costing 15 cents or less in restaurants that charged 5 cents for coffee or 20 cents in restaurants that charged 10 cents for coffee was excluded from the total. In this way, the actual quantities of food used for snacks were added to consumption of food in "regular" meals. In effect, a similar procedure is followed in the development of the estimates of home consumption by the Bureau of Human Nutrition and Home Economics. However, this definition excluded some light breakfasts from the meal count, and included some coffee and pie snacks as meals.

A second set of adjustments was necessary to cope with the problem of disproportionately large sales of dinners, for example, and no breakfasts, that is, sales of above-average meals. The general procedure was as follows: the first step was to ascertain the proportion of each restaurant's customers served at the morning, noon, and evening meals. Next, the average-sized check for each of the meals was computed. This check was multiplied by one-third of the total number of customers served (after the coffee customers had been eliminated) and the products for the three meals were added. If the restaurant had served seven average breakfasts, seven average lunches, and seven average dinners to each of its customers, this sum represents a normalized total of sales. Next, actual total sales were divided by the estimate of normalized total sales to derive an indication of how much above normal the disproportionate emphasis on certain meals brought the actual rates of consumption used for tables 30 and 31. The resulting percentages were then divided into the actual rates to derive the normalized rates of consumption per person per week. These were averaged by type of eating place to derive the data given in tables 32 and 33.

In general, the adjusted estimates of average rates of food consumption in the several types of public eating places are believed to be conceptually comparable with the national per capita rates of food consumed both at home and away from home and with the rates of home consumption derived from the Minneapolis-St. Paul sample survey. However, in making comparisons certain limitations of the data must be kept in mind. First is the fact that these estimates of food consumption in several types of eating places indicate the general levels of consumption in such establishments but that they have little or no statistical reliability as accurate estimates of either the rates of consumption in all Minneapolis eating places or of consumption rates in eating places in other cities. They were not derived from adequately-sized, randomly-selected sample establishments but from case studies.

Second, the family and national consumption rates, for example, are averages of consumption by children and adults, whereas public eating place rates are primarily averages of adult consumption. Also, there may be differences in the computed consumption rates because of a different proportion of waste and weight loss in food consumed in eating places. For example, there is much uneaten fat and bone on T-bone steaks, and probably these are more frequently served in steak houses than in homes. Plate waste is probably greater in high-priced eating places. Comparisons may also be distorted if people eat lightly at home after eating a big restaurant meal, or contrariwise if people eat lightly and economically when away from home and make up by eating larger amounts at the next home meal. Moreover, although the adjustments in this report crudely account for the differences in the total quantity (or values) of food consumed in breakfasts compared to other meals, they do not allow for differences in the proportionate composition of breakfasts compared to other meals.

A few comments may be of assistance in comparing the levels of consumption for the major food groups indicated in the tables.

Meats, Fish, and Poultry.- The short-order cafes serve many hamburgers as parts of meals, thus utilizing a relatively small amount of meat per portion. The high rates of consumption of meat, poultry, and fish in the higher-priced cafes and hotels studied reflect the emphasis of such establishments on meat dishes and the large portions of roasts and steaks served.

Dairy Products.- The relatively low levels of consumption of dairy products derived for the eating places surveyed give evidence of the omission of establishments that specialize in ice cream and other dairy products. Also the rate of milk consumption is low because of the proportionately small number of children who eat in them.

Eggs.- Consumption of eggs is directly related to emphasis on breakfasts. Cafes, short-order places, and hotels serve many breakfasts. Two of the three cafeterias do not serve breakfast, accounting for the low rate there. The high-priced cafes have little morning business.

Fats and Oils.- The use of these commodities was higher in all Minneapolis public eating places studied than that of the Minneapolis-St. Paul families or the national average. Deep-fat frying of French-fried potatoes, fish, and chicken probably account for much of the difference as it results both in greater direct consumption and in substantial losses of fat. In deep-fat frying, these losses arise from evaporation, deterioration, and waste.

Fruit.- Consumption of fruit was high at the hotels, probably reflecting generally fancy menus. Frequent use of large grapefruit for banquet appetizers and fresh oranges for juice were major factors. Except for the hotels, the cafeterias had the highest restaurant consumption of nearly 3 pounds a week compared to about 1 pound for the cafes, short-order places and high-priced cafes. This may be because of the fancy salad displays in cafeterias and the good fruit pies available for dessert.

Vegetables.- Consumption of vegetables also was relatively high at the cafeterias. The high-priced cafes have equally high rates, possibly reflecting the popularity of fancy salads with big meat dishes. Again hotels were by far the greater consumers. More potatoes were consumed per person in the public eating places studied than in the country as a whole and in Minneapolis-St. Paul families, partly because of the popularity of French-fried potatoes with steaks and hamburgers.

Flour and Other Grain Products.- Consumption of cereal products was about the same in medium-priced cafes and in the hotels surveyed as in the country as a whole, but it was lower in the cafeterias, the short-order cafe, and the high-priced cafes. The Minneapolis-St. Paul family rate of 2.52 pounds was between the national average and the lowest rate for eating places surveyed.

Sugar.- Consumption of sugar in direct form in medium-priced cafes and in cafeterias was about the same as in Minneapolis-St. Paul families but a little less than the national average.

Coffee and Tea.- Consumption of coffee and tea was generally somewhat higher in eating places than national average or family consumption. This may be associated with the between-meal coffee habit of many working people.

Table 30.- Unadjusted estimates of average per capita food consumption per week, selected Minneapolis public eating places, "as purchased" basis, winter and spring 1950, with comparative data for Minneapolis-St. Paul families and the United States

Food group	Minneapolis public eating places					United States per capita consumption, 1949, retail weight 1/	Minneapolis-St. Paul family food consumption, winter, 1948 2/
	6 medium-priced cafes	3 cafeterias	1 short-order counter service cafe	2 high-priced cafes	2 hotels		
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Meat 3/	1.94	3.17	2.25	4.86	5.18	2.63	2.39
Fish	.16	.30	.05	1.33	.95	.24	.21
Poultry	.29	.74	.14	2.41	3.08	.57	.25
Total	2.39	4.21	2.44	8.60	9.21	3.44	2.85
Dairy products, excluding butter (actual weight)	3.16	5.67	4.13	4.64	7.83	8.25	9.45
Eggs	.77	.76	1.61	.48	1.60	.89	.79
Fats and oils	.71	1.42	1.33	1.48	2.07	.87	.77
Fruits:							
Fresh 4/	.20	1.75	.26	.66	5.20	3.05	3.49
Canned	.18	.96	.45	.24	2.24	.65	1.04
Frozen	.11	.40	.33	.19	.43	.07	.02
Dried	.02	.18	.01	.03	.06	.09	.13
Total	.51	3.29	1.05	1.12	7.93	3.86	4.68
Vegetables:							
Fresh	.96	4.24	1.43	4.02	5.97	3.71	1.93
Canned 5/	1.05	1.82	.74	1.74	3.44	1.13	1.61
Frozen	.03	.12	---	.20	.87	.06	.07
Dried	.07	.10	.07	---	.06	6/ .09	.05
Total	2.11	6.28	2.24	5.96	10.34	4.99	3.66
Potatoes and sweetpotatoes	2.00	4.01	3.28	5.72	4.44	2.22	2.40
Flour	.55	1.61	.99	1.51	2.08	7/ 2.51	.65
Other grain products	.26	.45	.27	.33	.53	.73	.43
Bakery products	2.38	.47	1.69	.54	.86	---	2.44
Sugar, refined	.40	1.40	1.41	.81	1.17	8/ 1.08	.81
Coffee and tea	.29	9/	.29	.49	.64	.31	.30

1/ Data from "Supplement for 1950" to "Consumption of Food in the United States, 1909-48", Miscellaneous Publication No. 691, U. S. Department of Agriculture, Bureau of Agricultural Economics, Washington, D. C., given in the National Food Situation for July-September 1951. Annual rates for 1949 were divided by 52 to derive weekly averages. Includes use in processed foods except when noted.

2/ Data from table 4, "Family Food Consumption in Minneapolis-St. Paul, Minnesota, Winter 1948", Preliminary Report No. 2, U. S. Department of Agriculture, Bureau of Human Nutrition and Home Economics, Washington 25, D. C., December 20, 1948. About 253 families provided data for the sample survey in Minneapolis-St. Paul.

3/ Meats purchased in carcasses and wholesale cuts were adjusted to the retail equivalent weight by use of the data in "Meat Cutting and Pricing Methods", Arthur T. Edinger, U. S. Department of Agriculture, Washington, D. C., February 1935, reissued May 1942, page 1.

4/ Includes melons.

5/ Includes canned vegetables and vegetable juices, soups, and baked beans; also baby foods for United States and Minneapolis-St. Paul households.

6/ Excludes dry beans used in processing canned baked beans.

7/ Includes wheat and rye flour used as family flour and in processed foods, except breakfast cereals and semolina products, so is not directly comparable with eating place and family data.

8/ Excludes industrial use. Beet and cane sugar only.

9/ Not available.

Table 31.- Unadjusted estimates of average per capita food consumption per week, selected Minneapolis public eating places, redistributed by commodity group, winter and spring 1950, with comparative data for Minneapolis-St. Paul families and the United States 1/

Food group	Minneapolis public eating places					United States per capita consumption, 1949, retail weight 2/	Minneapolis-St. Paul family food consumption, winter, 1948 3/
	6 medium-priced cafes	3 cafeterias	1 short-order counter service cafe	2 high-priced cafes	2 hotels		
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Meat 4/	1.94	3.17	2.25	4.86	5.18	2.63	2.39
Fish	.16	.30	.05	1.33	.95	.24	.21
Poultry	.29	.74	.14	2.41	3.08	.57	.25
Total	2.39	4.21	2.44	8.60	9.21	3.44	2.85
Dairy products, excluding butter (fluid milk equivalent) 5/	3.80	7.18	4.61	6.07	9.75	10.34	11.58
Eggs	.81	.77	1.62	.48	1.60	.89	.84
Fats and oils	.82	1.43	1.37	1.52	2.10	.87	.78
Fruits:							
Fresh 6/	.20	1.75	.26	.66	5.20	3.05	3.49
Canned	.27	.96	.45	.29	2.35	.65	1.04
Frozen	.15	.40	.33	.19	.43	.07	.02
Dried	.02	.18	.01	.05	.06	.09	.13
Total	.64	3.29	1.05	1.19	8.04	3.86	4.68
Vegetables:							
Fresh	.96	4.24	1.43	4.02	5.97	3.71	1.93
Canned 7/	1.05	1.82	.74	1.74	3.50	1.13	1.61
Frozen	.03	.12	---	.20	.87	.06	.07
Dry beans and peas	.07	.10	.07	---	.06	8/ .09	.05
Total	2.11	6.28	2.24	5.96	10.40	4.99	3.66
Potatoes and sweetpotatoes	2.00	4.01	3.28	5.72	4.44	2.22	2.40
Flour and other grain products	2.04	2.33	1.75	2.21	4.02	3.24	2.52
Sugar, refined 9/	.74	1.46	1.45	.89	1.56	1.41	1.22
Coffee and tea	.29	10/	.29	.49	.64	.31	.30

1/ The content of major raw ingredients in purchases of such foods as bakery products, salad dressings, dessert powders, dairy products, and sirups was determined by means of conversion factors obtained from local sources and from the Department of Agriculture. These ingredients were added to the direct purchases in order to make proper comparisons of quantities, principally for flour, fats and oils, and sugar.

2/ Data from "Supplement for 1950" to "Consumption of Food in the United States, 1909-48", Miscellaneous Publication No. 691, U. S. Department of Agriculture, Bureau of Agricultural Economics, Washington, D. C., in the National Food Situation for July-September 1951. Annual rates for 1949 were divided by 52 to derive weekly averages.

3/ Data from table 4, "Family Food Consumption in Minneapolis-St. Paul, Minnesota, Winter 1948." Preliminary Report No. 2, U. S. Department of Agriculture, Bureau of Human Nutrition and Home Economics, Washington 25, D. C., December 20, 1948. About 253 families provided data for the sample survey in Minneapolis-St. Paul.

4/ Meats purchased in carcasses and wholesale cuts were adjusted to the retail equivalent weight by use of the data in "Meat Cutting and Pricing Methods", Arthur T. Edinger, U. S. Department of Agriculture, Washington, D. C., February 1935, reissued May 1942, page 1.

5/ Fluid milk equivalent on nonfat milk-solids basis. For details, see Misc. Pub. 691. p. 107.

6/ Includes melons.

7/ Includes canned soups and baked beans.

8/ Excludes dry beans used for canned baked beans.

9/ Includes direct sugar purchases and estimated sugar content of bakery products, dessert powders, etc., but excludes soft drinks, candy, and other confections.

10/ Not available.

Table 32.- Adjusted estimates of average per capita food consumption per week, selected Minneapolis public eating places, "as purchased" basis, winter and spring 1950, with comparative data for the United States and Minneapolis-St. Paul families

Food group	Minneapolis public eating places					United States per capita consumption, 1949, retail weight 1/	Minneapolis-St. Paul family food consumption, winter, 1948 2/
	6 medium-priced cafes	3 cafeterias	1 short-order counter service cafe	2 high-priced cafes	2 hotels		
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Meats 3/	2.83	2.83	2.64	4.38	5.00	2.63	2.39
Fish	.25	.27	.06	1.19	.90	.24	.21
Poultry	.31	.66	.15	2.15	2.97	.57	.25
Total	3.39	3.76	2.85	7.72	8.87	3.44	2.85
Dairy products, excluding butter 4/ (Fluid milk equivalent)	5.66	6.36	5.21	5.35	9.24	10.34	11.02
Eggs	1.34	.66	1.89	.44	1.56	.89	.79
Fats and oils	1.11	1.28	1.56	1.33	2.16	.87	.77
Fruits:							
Fresh 5/	.30	1.57	.31	.59	5.02	3.05	3.49
Canned	.37	.85	.52	.22	2.17	.65	1.04
Frozen	.24	.36	.38	.17	.43	.07	.02
Dried	.04	.12	.01	.03	.05	.09	.13
Total	.95	2.90	1.22	1.01	7.67	3.86	4.68
Vegetables:							
Fresh	1.52	3.77	1.68	3.59	5.82	3.71	1.93
Canned 6/	1.37	1.63	.87	1.55	3.42	1.13	1.61
Frozen	.04	.10	---	.18	.83	.06	.07
Dried	.11	.09	.08	.00	.06	7/ .09	.05
Total	3.03	5.59	2.63	5.32	10.13	4.99	3.66
Potatoes and sweetpotatoes	3.07	3.61	3.84	5.11	4.30	2.22	2.40
Flour and other grain products	1.25	1.85	1.48	1.69	2.72	8/ 3.24	1.08
Bakery products	3.91	.42	1.99	.50	.86	---	2.44
Sugar, refined	.80	1.25	1.65	.73	1.14	9/ 1.08	9/ .81
Coffee and tea	.49	10/	.33	.44	.62	.31	.30

1/ Data from "Supplement for 1950" to "Consumption of Food in the United States, 1909-48", Miscellaneous Publication No. 691, U. S. Department of Agriculture, Bureau of Agricultural Economics, Washington, D. C., given in the National Food Situation for July-September 1951. Annual rates for 1949 were divided by 52 to derive weekly averages. Includes use in processed foods except when noted.

2/ Data from table 4, "Family Food Consumption in Minneapolis-St. Paul, Minnesota, Winter 1948". Preliminary Report No. 2, U. S. Department of Agriculture, Bureau of Human Nutrition and Home Economics, Washington, D. C., December 20, 1948. About 253 families provided data for the sample survey in Minneapolis-St. Paul.

3/ Meats purchased in carcasses and wholesale cuts were adjusted to the retail equivalent weight by use of the data in "Meat Cutting and Pricing Methods", Arthur T. Edinger, U. S. Department of Agriculture, Washington, D. C., February 1935, reissued May 1942, page 1.

4/ Fluid milk equivalent on nonfat milk solids basis. For details see Misc. Pub. 691, p. 107.

5/ Includes melons.

6/ Includes canned vegetables and vegetable juices, soups, and baked beans; also baby food for United States and Minneapolis-St. Paul households.

7/ Excludes dry beans used in processing canned baked beans.

8/ Includes wheat and rye flour used as family flour and in processed foods, except breakfast cereals, so is not directly comparable with eating place and family data.

9/ Excludes industrial use. Beet and cane sugar only.

10/ Not available.

Table 33.- Adjusted estimates of average per capita food consumption per week, selected Minneapolis public eating places, redistributed by commodity groups, winter and spring 1950, with comparative data for the United States and Minneapolis-St. Paul families 1/

Food group	Minneapolis public eating places					United States per capita consumption, 1949, retail weight 2/	Minneapolis-St. Paul family food consumption, winter, 1948 3/
	6 medium-priced cafes	3 cafeterias	1 short-order counter service cafe	2 high-priced cafes	2 hotels		
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Meat 4/	2.83	2.83	2.64	4.38	5.00	2.63	2.39
Fish	.25	.27	.06	1.19	.90	.24	.21
Poultry	.31	.66	.15	2.15	2.97	.57	.25
Total	3.39	3.76	2.85	7.72	8.87	3.44	2.85
Dairy products, excluding butter 5/ (fluid milk equivalent)	6.14	6.37	5.41	5.49	9.47	10.34	11.58
Eggs	1.40	.68	1.90	.44	1.57	.89	.84
Fats and oils	1.31	1.29	1.61	1.35	2.05	.87	.78
Fruits:							
Fresh 6/	.30	1.57	.31	.59	5.02	3.05	3.49
Canned	.43	.86	.53	.27	2.27	.65	1.04
Frozen	.22	.36	.38	.19	.43	.07	.02
Dried	.06	.15	.01	.04	.06	.09	.13
Total	1.01	2.94	1.23	1.09	7.78	3.86	4.68
Vegetables:							
Fresh	1.52	3.77	1.68	3.59	5.82	3.71	1.93
Canned 7/	1.40	1.63	.87	1.55	3.42	1.13	1.61
Frozen	.04	.10	---	.18	.83	.06	.07
Dry beans and peas	.11	.09	.08	---	.06	8/ .09	.05
Total	3.07	5.59	2.63	5.32	10.13	4.99	3.66
Potatoes and sweetpotatoes	3.07	3.61	3.84	5.11	4.30	2.22	2.40
Flour and other grain products	3.28	2.10	2.05	2.01	3.25	3.24	2.52
Sugar, refined 9/	1.23	1.30	1.70	.81	1.52	1.41	1.22
Coffee and tea	.45	10/	.33	.44	.62	.31	.30

1/ The content of major raw ingredients in purchases of such foods as bakery products, salad dressings, dessert powders, dairy products, and sirups was determined by means of conversion factors obtained from local sources and from the Department of Agriculture. These ingredients were added to the direct purchases in order to make proper comparisons of quantities, principally for flour, fats and oils, and sugar.

2/ Data from "Supplement for 1950" to "Consumption of Food in the United States, 1909-48", Miscellaneous Publication No. 691, U. S. Department of Agriculture, Bureau of Agricultural Economics, Washington, D. C., in the National Food Situation for July-September 1951. Annual rates for 1949 were divided by 52 to derive weekly averages.

3/ Data from table 4, "Family Food Consumption in Minneapolis-St. Paul, Minnesota, Winter 1948". Preliminary Report No. 2, U. S. Department of Agriculture, Bureau of Human Nutrition and Home Economics, Washington 25, D. C., December 20, 1948. About 253 families provided data for the sample survey in Minneapolis-St. Paul.

4/ Meats purchased in carcasses and wholesale cuts were adjusted to the retail equivalent weight by use of the data in "Meat Cutting and Pricing Methods", Arthur T. Edinger, U. S. Department of Agriculture, Washington, D. C., February 1935, reissued May 1942, page 1.

5/ Fluid milk equivalent on nonfat milk solids basis. For details, see Misc. Pub. 691, p. 107.

6/ Includes melons.

7/ Includes canned soups and baked beans.

8/ Excludes dry beans used for canned baked beans.

9/ Includes direct sugar purchases and estimated sugar content of bakery products, dessert powders, etc., but excludes soft drinks, candy, and other confections.

10/ Not available.

CHAPTER 9.- RELATIVE IMPORTANCE OF EATING PLACES IN FOOD MARKETING

Introduction

A major objective of this pilot study was to investigate the importance of the marketing of food products through eating places in relation to the total quantity of food that reaches consumers through all channels of distribution. Consideration of this relative proportion is significant because (1) eating places use different food-marketing channels, (2) there is a joint demand for services along with food in eating places, (3) the costs of marketing food in this way are accordingly much higher, (4) there appear to be different patterns of food consumption in public eating places than in homes, and (5) changes in the proportion of food so marketed probably change the total demand for food.

Proportion of Civilian Food Supply Marketed Through Eating Places

It would be desirable to measure directly the proportion of the total volume of food consumed in a given area that is sold through all types of eating places. It is not now possible to do this, however, as data are available neither on quantities used by eating places nor on the total amount of food distributed in particular areas. An indirect measure of this proportion was computed by estimating from sales data the value of food purchased by eating places, adjusting this value to the approximate retail equivalent if the same quantity of food were purchased in retail food stores, and comparing this to the estimated retail value of all food as described below.

From these data, given in table 34, apparently all eating places of the country combined marketed about 16 percent of the food that entered into domestic civilian distribution in 1948, including sales as meals and food furnished civilian employees and withdrawn by proprietors. Public eating places accounted for the major portion, 11 percentage points. Sales of food through a variety of channels for home use, usually called off-premise consumption, amounted to a little less than three-fourths of the total, excluding supplies of food sold by retailers to eating places. Food consumed on farms where produced makes up the residual of 11 percent.

Methodology for United States Estimates

Estimates of sales of meals and related food items by eating places were developed, as indicated in table 2, primarily from data in the Census of Business, Retail Trade, supplemented by information as to sales of meals and beverages by institutions, clubs, industrial lunch rooms, schools, and school fraternities from the National Income Division of the

Table 34.- United States civilian food distributed in 1948: Sales value and estimated retail value, by channel of distribution 1/

Channel of distribution	Sales or market value	Estimated retail value	
		Value	Percentage of total
	Billion dollars	Billion dollars	Percent
Total food distributed to civilians, estimated retail value		49.0	100.0
Total value of food sold as food and as meals	2/ 44.7		
I. Eating places - sales and food furnished	11.5	7.8	15.9
- sales only	2/ 10.5	3/ 5.7	11.6
A. Public eating places	8.6	5.5	11.2
1. Meals and fountain items sold	8.1	3/ 4.8	9.8
2. Food furnished civilian employees and withdrawn by proprietors	.5	.7	
B. Private eating places	1.6	1.2	
1. Clubs, institutions, schools, etc.-sales	.8	.5	
2. Clubs, institutions, schools, etc.-food furnished employees	.2	.3	
3. Boarding houses	.6	.4	
C. Institutions and transportation agencies	1.3	1.1	2.2
1. Supplied to patients or patrons (meal value)	1.0	1.1	2.2
2. Furnished civilian employees	.3		
II. Sales for off-premise consumption			
A. Food sales of retail stores	32.0	32.0	65.3
B. Food sales of commissaries, service trades, and other establishments, n.e.c.	.8	.8	
C. Direct sales to consumers by farmers, hucksters, manufacturers, wholesalers	2.3	4.0	
Total sales for off-premise	35.1	36.8	75.1
Less retailers' sales to eating places	.9	1.0	
Sales to consumers - net	34.2	35.8	73.1
III. Food consumed on farms where produced	2.8	4/ 5.4	11.0

1/ See text for information on sources of data and methodology.

2/ From table 2. Includes food supplied patients or patrons by institutions and transportation agencies.

3/ Food cost estimated at 50 percent of sales; mark-up of 19 percent used for cost to retail sales value.

4/ Estimated farm value of farm food products sold was 52 percent of retail value in 1948.

Department of Commerce. 33/ In addition, it was necessary to make rough approximations to exclude sales of alcoholic beverages from the National Income Division's data, to put in a guess as to boarding-house sales, and to distribute the National Income Division's total value of food furnished employees and withdrawn by proprietors. Little supporting information is available for use in such approximations, but the magnitudes are relatively small. The final step in the process was to estimate the equivalent retail value of the food sold and "furnished" by eating places. On the basis of data concerning food costs assembled in this report, and some informed guesses, food costs of eating places were judged to be 50 percent of their sales of meals and related food items. Eating places apparently pay slightly more than wholesale prices for their supplies. A 5-percent differential was assumed. Such information as is available on the ratio of wholesale to retail food prices indicates that it might average 80 percent when all types of retail stores selling food are considered. Accordingly, (1.05) (.80 retail sales value) = .84 = ratio of food costs of eating places to retail sales value. This ratio was used to inflate the purchase value of cost of food sold by eating places to a level of value approximately equal to that of sales by retail stores.

Data relating to sales of food by retail stores for off-premise consumption were taken from the 1948 Census of Business, with an allowance for under-reporting. Sales of commissaries, service trades, and other establishments not elsewhere classified were estimated from miscellaneous information from the Defense Department and that assembled by the National Income Division. Approximations of direct sales to consumers by farmers, hucksters, manufacturers, and wholesalers were based on marketing studies of the Bureau of Agricultural Economics and some census data, with assistance on the latter by members of the staff of the National Income Division. Although no supporting data were available, an allowance had to be made for sales of retailers to eating

---

33/ The estimate used here of food sold for off-premise consumption in 1948 as derived from Census retail-trade data with adjustment for store turn-over (made upon the advice of specialists of the Bureau of the Census) is lower than the estimate of personal-consumption expenditures for food purchased for off-premise consumption in that year published by the Office of Business Economics, United States Department of Commerce. The food estimates of the latter are developed by the commodity-flow method as explained in the National Income Supplement to the Survey of Current Business, 1951. The Office of Business Economics expects to revise its currently published estimate for 1948 on the basis of the 1947 Census of Manufactures, 1948 Census of Business, and nonmanufactured food data from the Department of Agriculture. Preliminary results to date indicate a downward revision which accounts for perhaps no more than a fourth of the present difference between the two sets of off-premise food estimates. No satisfactory method of reconciling the remaining difference has thus far been developed.

places in order to avoid double counting. A retail value of 1 billion dollars for such sales was used after consideration of the relative sales volume of small eating places which buy part of their supplies from retailers.

Estimates of food supplied water and air travelers and inmates and employees of civilian hospitals and other institutions were based on information concerning institutional population and employment, some institutional purchase data, the number of air and water passengers, and some food-cost data for transportation agencies. The retail value is only a rough approximation. Because members of the eating-place industry regard the mass feeding activities of institutions and transportation agencies as coming within their industry, estimates of meal values of food they serve to inmates and patrons are included with direct sales of eating places.

The farm value of food consumed on farms where produced may be found in a regularly published series of the Bureau of Agricultural Economics. The retail value of such food was derived by use of the ratio of the farmer's share to the total retail value of farm food products for 1948, as estimated by this Bureau.

Proportion of Minneapolis and Fairmont Food Supplies Marketed Through Eating Places

Estimates of the total quantity of food purchased by all Minneapolis eating places, public and private, were developed by methods similar to those used for the United States data. These are compared with the estimated total value of the Minneapolis food supply in table 35. Apparently about 18 percent of the food consumed in Minneapolis in 1948 was marketed through eating places. A slightly higher proportion (22 percent) of the total value of meat, sea food, and poultry was marketed through eating places, apparently because of the greater emphasis on meats in many eating places, particularly the higher-priced ones.

From similar analysis of data for Fairmont, apparently about 16.5 percent of the value of Fairmont's food supply in 1948 was marketed through eating places, both public and private (table 36). Here again, the proportion of the total value of meat, fish, and poultry products was somewhat higher, about 21 percent.

The figure of 16.5 percent for Fairmont apparently is significantly lower than the 18 percent for Minneapolis. This lower rate seems to reflect the differences in living patterns between a small city and a large one, as well as the relatively large volume of food purchases in Fairmont retail food stores by farm people who eat few meals in Fairmont eating places.

Table 35.- Estimation of the retail equivalent value of Minneapolis food marketed by eating places in 1948, and comparisons with value of food distributed through other channels

Channel of distribution	All foods	Food groups		
		Meat, fish, poultry	Fresh fruits and vegetables 1/	Canned foods, dairy products, other food
	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.
1. Eating place food purchases:				
a. Valued at purchase price (wholesale or slightly above) 2/	25.4	9.2	2.3	13.9
b. Valued at retail food store equivalent 3/	30.2	11.0	2.7	16.5
2. Retail food store sales	138.0	40.1	15.8	82.1
3. Sales of food to consumers by farmers and other distributors	5/ 4.0	6/ 1.2	6/ .4	6/ 2.4
4. Less retail food store sales to eating places 4/	-3.3	-2.0	-.5	-.8
5. Total retail equivalent value of Minneapolis food supply	168.9	50.3	18.4	100.2
	Percent	Percent	Percent	Percent
Percentage of Minneapolis total marketed by eating places	17.9	21.9	14.7	16.5
Relation of retail value of commodity group to total retail value of Minneapolis food	100.0	29.8	10.9	59.3

1/ Including potatoes and sweetpotatoes.

2/ From table 27.

3/ Using a 19 percent mark-up over cost.

4/ Subtracted to avoid duplication. See page 92.

5/ Estimated as 3.0 million dollars direct sales by wholesalers to households and 1.0 million dollars as food purchased direct from farmers. The 3.0 million dollar figure was estimated from data in U. S. Census of Business, Wholesale Trade, Sales Classified by Type of Customer, Bulletin 2-W-4, page 4.27-8, and Wholesale Trade, Minnesota, Bulletin 1-W-22, page 22.07-8. Hennepin County data were used as an approximation for Minneapolis, and were estimated from the ratio of Hennepin County sales to Minneapolis-St. Paul metropolitan area sales. The 1.0 million dollar figure is only a guess.

6/ Because no information was available for use in distributing the total among the food groups, the pattern was assumed to follow that of retail food stores.

Table 36.- Estimation of the retail equivalent value of Fairmont food marketed by eating places in 1948, and comparisons with value of food distributed through other channels

Channel of distribution	All foods	Food groups		
		Meat, fish, poultry	Fresh fruits and vegetables 1/	Canned foods, dairy products, other food
	Million dollars	Million dollars	Million dollars	Million dollars
1. Eating place food purchases				
a. Valued at purchase price (wholesale or slightly above) 2/	0.43	0.15	0.02	0.26
b. Valued at retail food store equivalent 3/	.51	.18	.02	.31
2. Retail food store sales	2.58	.67	.24	1.67
3. Sales of food to consumers by farmers and other distributors 4/	.08	.03	.02	.03
4. Less retail food store sales to eating places 5/	.08	-.04	--	-.04
5. Total retail equivalent value of Fairmont food supply	3.09	.84	.28	1.97
	Percent	Percent	Percent	Percent
Percentage of Fairmont total marketed by eating places	16.5	21.4	7.1	15.7
Relation of retail value of commodity group to total retail value of Fairmont food	100.0	27.2	9.1	63.7

1/ Includes potatoes and sweetpotatoes.

2/ From table 28. Includes the hospital.

3/ Using 19 percent mark-up over cost.

4/ Estimated at 3 percent of retail food-store sales as in Minneapolis. Smaller purchases from wholesalers than in Minneapolis assumed to be offset by larger purchases from farmers. Distribution is merely a rough approximation.

5/ Subtracted to avoid duplication. See page 92.

Methodology of Estimates for Minneapolis and Fairmont

In order to estimate the proportion of the total food supply for Minneapolis and Fairmont marketed in the form of prepared meals through eating places, the value of all food sold for home consumption in the city was estimated. Food sales by retail stores were taken from the 1948 Census of Business. Concurrently, available information on sales by broad commodity groupings was assembled for comparison with the survey data. Sales of retail food stores were partly analyzed in the 1948 Census of Business data into (1) canned goods and other groceries, (2) meats, sea food, poultry, (3) fresh fruits and vegetables, (4) sales of dairy products by milk dealers and dairy-product stores, and (5) several other food and nonfood categories for certain types of stores. Estimates were made of total sales (analyzed sales plus nonanalyzed) for the food groups by applying percentage distributions from analyzed data to nonanalyzed sales for each of the separate categories.

The accuracy of this analysis of food-store sales has several limitations from the way in which the data are collected. It should be kept in mind that the bulk of the data concerning commodity sales come from the distribution of customer sales provided by cash registers in self-service food stores. These cash registers typically furnish separate totals of all sales by the meat department, the fresh fruit and vegetable department, and the remainder of the store. Sales by the meat department, however, may include sales of margarine, other shortenings, and a few canned-meat items. The "canned goods, other groceries" category includes all canned fish, other canned meat products such as canned luncheon meat, and in many cases other categories such as dairy products, frozen food items, and many nonfood items like soap, starch, clothespins, children's books, and utensils. Because grocery sales of dairy products were classified with "all other," it was necessary to include in this category sales of milk dealers.

Data for precise adjustments of purchases by eating places to a retail food store equivalent value are not available; therefore, the adjustments are only rough approximations. A thoroughly satisfactory series of adjustments would require comprehensive data relating to (1) the relation between average wholesale prices quoted to food stores and so-called "straight" wholesale prices quoted to eating places, (2) the savings realized by eating places in buying larger containers of food products such as 5-gallon tins of salad oil and No. 10 cans of many products, and (3) the 1948 average gross margins of retail food stores. For Minneapolis and Fairmont it was assumed that savings realized by eating places in buying food in larger containers approximately offset the small differential between the prices wholesalers charge eating places and those they charge retailers, or the slightly higher-than-cost prices charged by retailers for food they sell to eating places. Accordingly, the food costs of eating places were adjusted upward by the same average mark-up on cost as that used by retail food stores. Selected data on gross margins of food stores, including some data relating to the area around Minneapolis, indicate that an average of 16-percent gross margin on sales (or 19 percent on cost) is reasonably appropriate for Minneapolis and Fairmont.

Direct sales of food by wholesalers to households in Minneapolis were estimated at 3 million dollars from census data on wholesale trade. Another million dollars was added as an approximation of the value of eggs, poultry, fruits and vegetables, and meat sold by farmers to consumers. The value of food sold by farmers and wholesalers directly to Fairmont consumers was estimated at the same proportion of retail food-store sales as in Minneapolis. Smaller purchases from wholesalers were assumed to be offset by larger purchases from nearby farmers.

Finally, adjustments were made to avoid counting twice the food sold by retail food stores to eating places which in turn sold the same commodities to consumers in the form of prepared meals. Estimates of the retail values of such purchases of meats, poultry and fish; of fresh fruits and vegetables; and of other foods were developed for Minneapolis on the basis of information obtained from the interviews and the case studies and for Fairmont from the case studies.

On the basis of the foregoing procedure and the data given in tables 35 and 36, it was possible to estimate that 18 and 16.5 percent of the total 1948 food supply for Minneapolis and Fairmont, respectively, moved to consumers through eating places of all types. The proportion varied from 15 percent for fresh fruits and vegetables to 22 percent for meat, sea food, and poultry in Minneapolis, and from 7 percent for fresh produce to 21 percent for meats in Fairmont.

Other Measures of the Relative Importance of Eating Places in Food Marketing

The significance of eating places as marketers of food can also be evaluated in terms of the dollars spent in them for food, or for food and alcoholic beverages combined, in comparison with the total amount of money spent by consumers to buy food or food and beverages from other types of distributors. It is immediately apparent that these comparisons of sales values ascribe greater importance to eating places because sales of meals at menu prices include sales of the services rendered to consumers by eating places, as described in earlier chapters of this report. Whereas all types of eating places in the United States marketed about 16 percent of the country's food supply (table 34) in 1948, they accounted for 23 percent of the total sales of food in all forms, as food commodities, as meals, and as fountain items (table 37). Furthermore, the total sales of alcoholic beverages combined with food sales of eating places amounted to 28 percent of the sales of food and beverages in the United States.

Comparable data for Fairmont and Minneapolis show how eating places become of increasing significance as the degree of urbanization increases. Meal and fountain sales of eating places in Minneapolis made up about 28 percent of the total food sales in that city in 1948, but the proportion for Fairmont was 22 percent, about the same as the United States average. Addition of sales of alcoholic beverages and tobacco brings the Minneapolis percentage for eating places up to 37 percent and the Fairmont percentage to 28 percent.

The expenditure pattern developed from the data relating to urban sales of food and beverages in Minneapolis may be compared with the proportions reported by Minneapolis-St. Paul families. In the winter of 1948, 250 of these families reported that about 12 percent of their food and beverage expenditures went for eating and drinking away from home. This was only about one-third of the average indicated by the sales data. A variety of factors contribute to this difference. The sales data relate to the entire population, including out-of-town visitors and single individuals, and not families only. Moreover, because of its design the survey covered families which eat mostly at home. Snacks and drinks away from home are considerably under-reported. Also, families probably eat out less during winter than in milder weather.

Table 37.- Sales of meals, fountain items, and alcoholic beverages by eating and drinking places and sales of food and alcoholic beverages for off-premise consumption, with comparisons, Minneapolis, Fairmont, and the United States, 1948 1/

Channel of distribution	Minneapolis		Fairmont		United States 2/	
	Sales	Percent of total	Sales	Percent of total	Sales	Percent of total
	Million dollars	Percent	Million dollars	Percent	Billion dollars	Percent
A. Food only						
1. Sales of meals and fountain items by all eating places	54.8	28	0.77	22	3/ 10.5	23
2. Sales of food by retail stores and others directly to consumers for off-premise consumption	4/142.0	72	4/2.66	78	34.2	77
3. Total food sales	196.8	100	3.43	100	44.7	100
B. Food and alcoholic beverages						
1. Sales of meals, fountain items, and alcoholic beverages by all types of eating and drinking places	5/90.2	37	5/1.06	28	3/ 14.9	28
2. Sales of food and alcoholic beverages by retail stores and others directly to consumers for off-premise consumption	154.6	63	2.66	72	37.9	72
3. Total food and beverage sales	244.8	100	3.72	100	52.8	100

1/ Excludes food furnished employees, withdrawn by proprietors, and that consumed on farms where produced.
2/ Includes both urban and rural areas.
3/ Includes food furnished patrons with institutional and transportation services.
4/ Total of items (2) and (3) in tables 35 and 36.
5/ Includes tobacco products and small miscellaneous items.

APPENDIX A

Classification Schedule

Identification:
Address
Business Name
Operator
Interviewee and Position
Date Time Weather

Class ____________________

Sample No. ______________

1. Type of service:
    - a. full, fancy service, table cloth, and cloth napkin
    - b. full service, booths, or tables, less fancy
    - c. cafeteria
    - d. counter service only
    - e. counter and tables or booths
    - f. other
2. Type of food served:
    - a. wide variety - including full dinners (8 or more entree choices)
    - b. moderate variety - including full dinners (3 to 7 entree choices)
    - c. limited variety - full dinner (1 or 2 entrees), short orders
    - d. hamburger or sandwich shop, very short order
3. Location:
    - a. central loop
    - b. fringe of loop
    - c. wholesale-light mfg.-commercial
    - d. suburban shopping center
    - e. isolated or small center
4. General economic status of location:
    - a. upper
    - b. middle
    - c. lower

5-6. Appearance of building, exterior and front:
- a. new
- b. middleaged
- c. old

- a. fancy
- b. moderately nice
- c. economy-utilitarian
- d. cheap-poor

7-8. Interior decoration and furnishing:
- a. new
- b. middleaged
- c. old

- a. fancy
- b. moderately nice
- c. economy-utilitarian
- d. cheap-poor

9. Extent of entertainment:
    - a. none
    - b. jukebox
    - c. piped music
    - d. orchestra
    - e. orchestra plus floor show, etc.
    - f. other

10. Apparent type of customers:
    - a. business-professional
    - b. office workers
    - c. shoppers (mostly women)
    - d. laborer and industrial
    - e. student

11-13. Condition of interior air at time of interview:

Temperature:	Humidity:	Odors:
a. high	a. good	a. none
b. good	b. fair	b. pleasant
c. low	c. bad	c. fair
		d. unpleasant

14. Extent of air-conditioning equipment:
    - a. complete air conditioning
    - b. unit air cooler
    - c. good ventilation
    - d. poor ventilation
15. General cleanliness:
    - a. excellent
    - b. good
    - c. fair
    - d. poor
16. Alcoholic beverages:
    - a. none
    - b. beer - light consumption
    - c. beer - heavy consumption
    - d. beer and liquor - light
    - e. beer and liquor - heavy
17. Extent of kitchen equipment
    - a. none
    - b. potato peeler
    - c. dishwasher
    - d. mixer
    - e. other
18. Seating capacity:

a. stools ________	Tables or booths - 2 persons	
b. total table or booth seats ________	Tables or booths - 3 persons	Guess
	Tables or booths - 4 persons	Estimate
c. total ________	Tables or booths - 5-6 persons	Count

19. Dinner prices:
    - a. highest ________
    - b. median ________
    - c. lowest ________
20. General impression of the management:
    - a. excellent
    - b. good
    - c. fair or average
    - d. poor
    - e. failing

APPENDIX B

Detailed Analysis of Interviews with Restaurateurs

1. "Where do you usually buy your canned fruits and vegetables?"

Five in six (83 percent) restaurateurs bought canned fruits and vegetables from restaurant-supply or wholesale houses. The others were about evenly divided between buying at retail, buying from retailers at special prices, and not buying canned fruits and vegetables (short-order lunch counters). As might be expected, proportionately more small restaurants bought from restaurant supply houses, whereas proportionately more large restaurants bought from wholesalers.

In terms of volume, eating places accounting for 95 percent of the sales volume of the sample group bought canned fruits and vegetables in cases, and the remainder bought in retail quantities.

Buying in case lots is to be expected because canned goods are not perishable and even the smallest restaurant can use cases of popular foods within a month or so. No questions were asked as to the sizes of canned goods purchased, but the special studies of individual firms revealed that smaller eating places often buy some foods in cases of No. 2 or No. 2 1/2 cans as well as in cases of No. 10 cans.

2. "Do you buy canned fruits and vegetables on the basis of United States grades?"

About 75 percent of the eating places did not use U. S. grades in buying canned goods; only 13 percent used these grades; others did not buy canned fruits and vegetables. Only one-fourth of the cafes with annual sales of more than $35,000 used U. S. grades in their buying.

By way of explanation, it is well known that grades are seldom placed on cans, but it was believed that large final users might insist upon obtaining grades from suppliers as an aid in standardizing quality. Apparently this is not correct, although less specific indicators of quality, such as "best quality" or "best brands," were mentioned as aids in purchasing.

3. "What grade or quality of canned fruits and vegetables do you usually buy for straight serving purposes; that is, not in combination or stew dishes?"

As most eating places did not use U. S. grades, the interviewer attempted to interpret the less specific quality indications into comparable U. S. grades in order to obtain rough data as to quality preferences. Half of the eating places bought approximately standard quality, about a fourth bought choice or extra-standard, and only a tenth bought fancy quality. Nearly all small cafes specified standard quality, and nearly two-thirds of the larger cafes specified extra standard or fancy qualities. Most of the lunch counters bought standard or substandard, or didn't buy fruits and vegetables other than soup and catsup.

4. "Do you think your customers would notice it if you regularly served a higher quality or grade of fruits and vegetables than you now serve?"

About a third of these restaurateurs thought their customers would not recognize an improvement in the quality of canned goods served; 22 percent thought the customers would recognize such an improvement; and 20 percent said the best grades were now being served. This is roughly consistent with the replies to question number 3.

Thus three-fourths of the large restaurant operators said either that customers would notice an improvement in quality or that high-quality foods were already being served. This indicates more quality consciousness by large-volume operators than by small-volume operators, as three-fourths of the latter believed their customers would not notice higher quality, or did not know whether customers would notice it.

5. "A lower quality?"

Three-fourths of the restaurateurs believed that customers would notice a drop in quality from that presently served. This may be a reflection of the public's readiness to complain if things aren't right.

6. "Can you think of any changes in the producing, processing, or marketing of canned fruits and vegetables that might make them better suited to your needs? For example, we might consider changes in the size of can, size of fruits or vegetables, type of sirup, combinations of different kinds, or particular quality aspects."

Only 6 of 71 operators had suggestions for improvement of canned goods. These suggestions were:

a. Use cans comparable to "No. 3 cylinder" for peas, corn, etc. The suggestions came from two small-volume places that could not utilize No. 10 cans but thought No. 2 cans were expensive packages per serving.
b. Reduce prices.
c. Use labels that stay on cans.
d. Provide larger cans than No. 10 for fast-moving items like corn and peas.
e. Provide more "solid-pack" goods.

7. "Where do you usually buy your fresh fruits and vegetables?"

About 54 percent of the restaurateurs interviewed bought fresh fruits and vegetables at restaurant-supply or wholesale houses, and 45 percent bought from retailers (about 28 percent at special prices and 17 percent at regular prices). Only one restaurateur bought from the farmer's market in season.

Most of the larger street restaurants and all hotels bought fresh fruits and vegetables from restaurant-supply or wholesale houses, essentially in wholesale units. Restaurant-supply houses often sell half crates of lettuce--

30 heads--but generally not in smaller quantities. Only two large street restaurants bought at retail. One of these is a "cook-to-order" establishment; it serves little fresh produce except lettuce. The other bought through a retailer for reasons of convenience. Half of the smaller street restaurants bought fresh fruits and vegetables at wholesale and half at retail, mostly at special prices. Other places followed roughly similar patterns according to their size. Eating places accounting for 77 percent of sales of the group bought fresh fruits and vegetables in wholesale units; eating places representing only 14 percent of sales bought at special retail prices; those representing about 7 percent of sales bought at regular retail prices; and those representing 2 percent of sales bought some items at the farmer's market.

8. "What grade or quality of fresh fruits and vegetables do you usually buy?"

Thirty-eight restaurateurs, or 58 percent of the 66 who buy fresh fruits and vegetables, said they bought only the "best" in fresh fruits and vegetables. Thirty percent bought "good" quality, and 11 percent bought "fair" quality. Quality here is largely a matter of freshness and condition. Reactions were generally definite, as evidenced by the large number of comments. Each interviewee was asked: "Any comment on that?" The answers are summarized in the following tabulation of the comments relating to the good and best grade preferences:

Frequency		Comment
3	(2	Pay the price and demand good quality.
	(1	We pay for good quality and then have proper recourse on defective merchandise
16	(5	Less waste on good quality.
	(5	Good grades are the best buy for the money.
	(6	More portions per dollar from good quality.
5		Best quality to satisfy present clientele.
6		Best-quality produce keeps better.
2		Best grades take less labor time to prepare.

Only one comment was made relating to lower-quality produce. It was to the effect that more produce could be obtained for a dollar in the lower grades.

9. "For various reasons, it may not be practical to buy, prepare and serve fresh fruits and vegetables when they are available. To what extent do you buy and serve fresh fruits and vegetables when they are available at moderate prices instead of serving canned fruits and vegetables?"

Forty-two percent of the restaurateurs said they usually or always serve fresh fruits and vegetables when available at moderate prices instead of serving canned fruits and vegetables. About the same proportion of small and of large street-restaurant operators gave such opinions. Representatives of nearly all the department stores and hotels interviewed said they usually or always serve fresh in preference to canned fruits and vegetables when fresh are available at moderate prices.

Twelve percent of the operators serve fresh fruits and vegetables instead of canned about half the time when fresh is available at moderate prices; 39 percent usually do not or never serve fresh instead of canned; and 8 percent do not buy fruits and vegetables.

Part of the purpose of asking the question was to ascertain the extent to which the labor cost of preparation might hinder the use of fresh items even when available at moderate prices.

10. "Why do you follow this practice?"

Those operators who answered question 9 as favoring fresh fruits and vegetables gave the following reasons:

Frequency	Reason
14	Fresh preferred by customers.
12	Fresh produce has better flavor.
2	Fresh produce adds variety to the menu.
2	Fresh produce has more vitamins.

Those restaurateurs who did not favor fresh in preference to canned fruits and vegetables gave these reasons:

Frequency	Reason
25	Canned foods are quicker to prepare and easier to serve, thus saving expensive labor time.
3	Canned foods are cheaper.

11. "Do your customers prefer fresh fruits and vegetables over canned, don't care, or dislike?"

The 65 restaurateurs interviewed who serve fruits and vegetables gave the following replies.

Frequency	Reply
42	Customers prefer fresh fruits and vegetables rather canned.
13	Customers don't care whether they have fresh or canned items.
5	Customers dislike fresh fruits and vegetables.
5	Restaurateur does not know about customer preference.

12. "Of the total of fruits that you serve in a year, what is the approximate percentage that is canned, fresh, and frozen?"

The average restaurateur in this sample bought 63 percent canned fruit, 25 percent fresh fruit, and 12 percent frozen fruit. These percentages are based on estimates by the restaurateurs, not on analyses of accounting records. Percentages vary between eating places that bake their own pies and those that buy commercially baked pies.

13. "Consider vegetables of the type that you typically might buy in canned form, such as corn, green beans, carrots, beets, peas, etc. (excluding potatoes, onions, lettuce, cabbage, and celery that are almost never canned). What percent of these vegetables that you serve in a year are canned, fresh, and frozen?"

The average restaurateur bought 68 percent of the above vegetables in canned form, 27 percent in fresh form, and 5 percent in frozen form. Apparently, there were no significant differences among types of eating places in this regard.

14. "How do your customers like frozen fruits and vegetables compared with canned fruits and vegetables?"

Of the 21 restaurateurs who expressed an opinion, about two-thirds believed their customers preferred frozen to canned fruits and vegetables. About two-thirds of the total number of operators did not use frozen fruits and vegetables. All the hotels sampled believed their customers preferred frozen foods to canned. None of the lunch counters used frozen foods.

15. "How do your customers like frozen fruits and vegetables compared with fresh fruits and vegetables?"

Of the 20 restaurateurs who expressed an opinion, about two-thirds believed customers were neutral as between frozen and fresh fruits and vegetables, and one-third believed customers did not like frozen as well as the fresh products. It should be noted that no restaurateur thought customers preferred frozen to fresh fruits and vegetables.

16. "Where do you buy your meats, such as pork, beef, veal and lamb, but not including fish and poultry?"

About 66 percent of the eating places (or 47 places) bought meats at restaurant-supply or wholesale houses. Of these, three places bought some meats at retail stores. No doubt a larger number may buy a few items at retail stores now and then, but all of these consider themselves to be wholesale purchasers. Only two of the 47 bought by direct arrangement with a packer through a local retailer. Five-sixths of restaurants with annual sales of $35,000 or more bought wholesale cuts and half of those with sales under $35,000 bought wholesale cuts. Those restaurants with sales under $35,000 who concentrated on meats and those who were near the $35,000 mark were able to utilize wholesale cuts efficiently. Of the 34 percent, or 24 places, that bought at retail stores, about two-thirds bought at special prices. Department and variety stores and hotels bought only wholesale cuts. Employee cafeterias and institution-sponsored operations bought most of their meat in wholesale cuts.

Weighting the replies by volume of sales of the restaurants, 82 percent of the meat for eating places included in this sample was bought from restaurant-supply houses and regular meat wholesalers and 18 percent from retailers.

17. "What meat-buying arrangements do you make?"

Nearly every place (96 percent) bought meats from the same supplier regularly at daily prices. Many operators said it was a matter of convenience to establish the types of cuts, time of delivery, quality, and credit with one supplier and then continue, placing daily orders by phone. These operators usually indicated that dealings with meat suppliers had to be "strict," however, partly because of errors in delivering wrong packages, partly to verify the weights, or weight bases in case of semi-processed meat, but mostly to control the quality of the cuts of meat delivered. Quality here carried connotations as to extent of trimming as well as of tenderness. Only one operator in the sample used a formal bid system.

18. "What grade of beef do you usually buy?"

Responses to this question indicated that operators of eating places were generally familiar with meat grades, much more so than with grades on canned goods. Many operators gave a range of two grades. The better one was usually specified for roasts and steaks, and the cheaper for such dishes as potroasts and swiss steaks. The replies, in terms of the grades as defined before the December 1950 revisions, are:

Frequency	Reason
18	U. S. Commercial (now Commercial and Good)
4	Both U. S. Good and U. S. Commercial
27	U. S. Good (now Choice)
5	Both U. S. Good and U. S. Choice
1	U. S. Choice (now combined with Prime)
55	
2	"Best at the stores," probably equivalent to the former "top commercial."
1	"The best"--doubtful integrity of reply.
1	U. S. Choice--doubtful integrity of reply.
5	Buy only hamburger and sausage.
7	Don't know.
16	

19. "Why do you choose this grade?"

Restaurateurs who preferred U. S. Commercial beef (now Commercial and Good) gave the following reasons for their preferences:

Frequency	Reason
8	Less fat and waste.
7	Cheaper.
1	Satisfactory for present clientele.

Restaurateurs who preferred U. S. Good or U. S. Choice grades (now Choice and Prime) gave the following reasons for their preferences:

Frequency	Reason
15	Customers want tenderness and flavor.
11	Better flavor.
9	Less shrinkage and therefore more servings per purchase dollar.
6	Need good meat for select clientele.
2	Prefer to serve smaller portion of good meat than larger portion of poor meat.
1	Have recourse on supplier if not good.
1	Takes less time to prepare.
1	Chef prefers to use this grade.
1	Has more sales appeal.
1	Keeps better.

20. "How do you usually adjust for day-to-day changes in meat prices?"

About 72 percent of the restaurateurs absorb day-to-day changes in meat-buying prices, 17 percent change the size of portions, and 7 percent change prices. One operator said he avoided seasonally high-priced meat as much as possible, and two said their meat prices change very slowly. None of the four hotels absorbed price changes, but rather changed either portions (3) or prices (1). Except for the hotels, no significant differences were found in size, price class, or type of place in the responses to the above question.

21. "What changes in the entire matter of meats would help to make your operation more efficient?"

There were relatively few suggestions in this regard. Those offered are as follows:

Frequency	Suggestion
8	Lower prices.
3	Consistent quality within grades.
3	Greater choice of precut, or pan-ready, meats.
1	Better quality in canned meats.
1	Less gristle in minute steaks.
1	Leaner pork loins; willing to pay a differential.

22. "Where do you buy your chickens and turkeys?"

Of the 55 eating places (77 percent of the total) that bought poultry, two-thirds bought from wholesale dealers. Sixteen lunch counters and small cafes, or 23 percent of the total, did not serve poultry. Weighting the replies by volume of operations, eating places that accounted for 20 percent of total sales bought from restaurant-supply houses, those accounting for

28 percent from wholesale meat dealers, 27 percent from produce dealers, 10 percent from retail stores, and 6 percent from local farm producers. Eating places that represented 9 percent of sales did not buy poultry.

23. "Do you buy chickens dressed, drawn, or cut up?"

Of those eating places that bought poultry, about 23 percent bought dressed chickens, 62 percent drawn, and 15 percent cut up. About half of the larger street restaurants bought dressed chickens. Relatively few of the eating places other than street restaurants bought dressed chickens. This may reflect a smaller degree of kitchen processing in places not primarily engaged in meal serving.

24. "If you replied 'dressed' for No. 23, would you be interested in buying eviscerated or drawn poultry?"

Most of the eating places that bought dressed would not be interested in buying drawn chickens. Dressed chicken was preferred for the following stated reasons:

Frequency	Comment
4	Drawn costs more.
3	Habit.
2	It is easier to determine the freshness of the poultry in dressed form.
2	Prefer dressed when buying in quantity for freezing.
1	Drawn chickens are not cleaned well.
1	The weight cannot be checked. (Priced on dressed basis.)

25. "Have you any suggestions as to how the processing, packaging, and distributing of milk for fluid consumption could be done in a way that better suits your needs?"

Twenty comments were made in this connection, as follows:

Frequency	Comment
6	Have and like bulk milk dispensers.
4	Like and may buy bulk milk dispensers.
4	Prefer paper cartons.
1	Dislike aluminum bottle covers because of difficult opening.
2	Dislike double covers on small bottles.

Note: Local health authorities have approved certain types of bulk dispensers.

26. "Where do you usually buy your whole eggs?"

Twenty-two, or 31 percent, of the 71 eating places bought eggs from restaurant-supply or produce houses; 38, or 54 percent, bought directly from local producers or from egg-route vendors, and 11 places, mostly small cafes and lunch counters, bought eggs from retail stores.

When the replies were weighted by the apparent volume of sales of the restaurants, apparently about 33 percent of the purchases were case purchases from restaurant-supply or produce houses; 6 percent came from retail stores; and 61 percent came directly from local producers or from egg-route vendors who generally represent local producers.

27. "Most people have difficulty in securing good quality eggs for serving when egg production on farms is low, or when quality is poorer due to hot weather. How do you meet this problem?"

Forty-five of the 71 eating places replying, or 63 percent, reported little or no problem with poor eggs in hot weather. Eight operators make purchases more frequently; 5 are generally "strict with the egg man" and have no trouble; 4 emphasized cool storage; and 2 do not buy eggs in summer; 3 didn't use eggs; and 3 admitted a problem with eggs but had no suggestions.

28. "What percentage of the following products do you bake here: bread, rolls and buns, breakfast rolls, cakes, pies, and specialties?"

Cakes and pies were most frequently baked in eating places rather than purchased outside (27 of 71 places, or 38 percent) and bread least frequently (4 of 71, or 6 percent). Two of the four establishments that bake their own bread have retail bakery counters and specialize in high-quality breads. The third is an institution which wants to create jobs for available cheap labor. The fourth is a cafeteria that features "home-baked goods" as an attraction.

Dinner rolls and buns were baked by 18 in 71 places, breakfast rolls by 13 in 71, and varying amounts of other specialties by 15 in 71.

29. "Why do you do your own baking as indicated above?"

The following reasons were given:

Frequency	Comment
17	Customers prefer.
17	Better taste and quality.
9	Cheaper for large volume.
2	Have the facilities and may as well use them.
1	Have a good cook and may as well use her.
1	Able to make rich pastries that won't stand handling.

30. "What changes would make commercially prepared bakery products more suitable to your needs?"

The following suggestions were made:

Frequency	Comment
14	Better quality and flavor.
9	Better ingredients.
6	More flavorful pies.
2	Do something to keep goods fresh longer.
2	Want prices lower on the top-quality goods that are comparable to home baking.
1	Make smaller portions for lower serving price.
1	Want less greasy doughnuts.
1	Want more variety in breakfast rolls.

Three of the 71 are satisfied now. Three others said nothing could help commercially baked goods and that only their own baking was satisfactory.

31. "At least one competent person in the industry has said that the trend in restaurant food buying is toward buying foods that have been more completely prepared before reaching the restaurant kitchen, thus tending to reduce preparation time in the kitchen and adding to the food cost. Examples are buying baked pies, peeled potatoes, and processed forms of food such as frozen and canned goods. Is this the trend in your establishment?"

About 58 percent of the group said this was the trend; 6 percent said this was the trend except for bakery goods; and 35 percent said this was not the trend.

32. "Do you think such buying of processed foods will reduce TOTAL cost for your restaurant, realizing that it will tend to increase food costs but reduce labor costs?"

Forty-seven operators, or 66 percent, believed that buying processed foods would reduce total costs for restaurants; 4 said it would not affect costs; 10 said it would increase costs. Six of these said it is necessary to utilize more fully the labor already employed. Eight operators replied that they didn't know.

33. "How do you estimate the number of meals you expect to serve on a particular day, and therefore the amount of food that you buy and prepare?"

The factors mentioned as considered in estimating the amount of food to prepare on a given day are as follows:

Frequency	Factor
34	Weekly pattern of business.
24	Expected weather.
23	Same amount every day.
14	Local activity pattern (sale events, nearby employment, etc.)
13	Seasonal factor.
4	Pay day.
2	Monthly pattern.
1	State of business activity.
1	Hotel occupancy.
1	Previous day's sales.

Conversations with restaurateurs revealed no formal systems of estimating the amount of business to expect. Two large cafeterias said they specifically watch the weather during the morning and again just before serving time. These places perform extensive preparation concurrently with serving, and actually gear the speed of food preparation to the length of the waiting line in the building. One large operation has a menu-planning service. The menu is submitted to the assistant manager two days ahead of serving. He then estimates the probable sales of each item and buys accordingly. These estimates constitute production orders for the kitchen. Such advance planning is necessary in a large place but for the cafeteria type of operation, it may be somewhat inflexible. Several places consult records of sales for the same day for the previous year (the day is shifted to a comparable day in the week of a year earlier). Apparently this is particularly useful in estimating business patterns around holidays and annual events.

34. "In a broad sense, what do you believe are the important factors that cause people to eat out, such as in your establishment, rather than to eat at home, for those people who have a choice between the two?"

Frequency	Comment
19	Taste and flavor of restaurant meals.
12	Eating out as a form of entertainment.
11	Greater variety, or change of food, available in restaurants.
10	Service and hospitality.
10	Desire to avoid cooking and dishwashing at home.
8	Size of people's income or earnings.
8	Low food prices.
8	Convenience and speed of eating out.
8	Relative cost of meals "out" compared to eating at home.
7	Hot meals preferred over box lunches.
5	Attractive dining rooms (Atmosphere).
5	Clean establishments.
4	Having time to eat in restaurants.
2	Large servings.
2	Well-balanced meals.

The sixth place accorded to income as a factor was somewhat unexpected. As a form of entertainment, it would seem that eating out would be greatly affected by the level of income. Ranking this factor in sixth place may reflect the idea of some restaurateurs that one quick way to get customers is to take them from a competitor. The primary concern with good "taste and flavor" seems appropriate from any standpoint.

35. In an attempt to evaluate the importance of several factors believed to bear on the demand for restaurant meals, operators were asked this question:

> "The following things may influence people to eat meals in restaurants rather than to eat at home, or to carry a lunch from home. We are speaking now of those persons who are in a position to make a choice. Please tell me which three of these things you think are most important in influencing people to eat meals in restaurants, rather than to eat at home or to carry a lunch from home.
>
> a. Size of people's income or earnings.
> b. Future job opportunities.
> c. Cost of meals "out" compared to eating at home.
> d. Wishes of wife or husband to eat out.
> e. Greater variety available in restaurants.
> f. Taste and flavor of restaurant meals.
> g. Service and hospitality in restaurants."

The replies were:

Frequency	Comment
40	Size of people's income or earnings.
29	Service and hospitality in restaurants.
28	Greater variety available in restaurants.
27	Cost of meals "out" compared to eating at home.
27	Taste and flavor of restaurant meals.
21	Wishes of wife or husband to eat out.
8	Future job opportunities.

Many operators thought that income is unquestionably important, and " . . . Let's see--what other two?. . .". "Future job opportunities" seemed unimportant, and "wishes of husband or wife to eat out" was somewhat less important than the remaining choices.

36. "What are the principal sources of food waste in your establishment? I refer to such things as deterioration of purchases, or spoilage while in stock, or trimmings in preparation, cooking loss, or food left on plates, etc., regardless of whether it is under your control?"

Frequency	Comment
13	Improper handling in transportation and storage.
11	Overproduction and left-overs.
7	Portions are too large.
7	Cooking failures.
4	Inappropriate buying.
4	Trimming losses.
3	Unexpected weather causing low sales or change in type of food sold.
1	Cooking losses.

Twenty-three operators said they had very little or no waste of food and six didn't know what the principal sources of food wastes were, if any.

37. "Have you any suggestions as to how food wastes and losses can be reduced by yourself or others?"

The following suggestions were made:

Frequency	Comment
8	Careful handling and refrigeration.
7	Train and supervise employees in proper methods.
5	Avoid overproduction.
3	Use portion control.
3	Cook only to order.
3	Give portions appropriate to customers' eating habits.
2	Try to avoid cooking failures.
2	Try to predict sales better.
1	Use machines to peel fruits and vegetables.
1	Limit number of items.
1	Make good use of left-overs.

APPENDIX C

Bureau of the Census Definition of Eating and Drinking Places [34]

"This group includes retail establishments selling prepared food, and drinks for consumption on the premises, and also lunch counters and refreshment stands selling prepared food and drinks for immediate consumption. Restaurants and lunch counters operated as leased departments within other retail businesses were treated as part of the establishment in which they were located. However, restaurants and lunch counters operated as leased departments or concessions in businesses other than retail, are included in this classification as eating and drinking places.

Restaurants, cafeterias

"These are retail establishments primarily engaged in selling complete meals and having full table service facilities.

Caterers

"These are retail establishments primarily engaged in the preparation of food, and serving of that food elsewhere.

Lunch counters, refreshment stands

"These are retail establishments primarily engaged in selling limited lines of refreshments such as fruit juices, soft drinks, or short-order meals for immediate or on-premise consumption. They do not have full table service facilities. The classification also includes operators primarily engaged in selling soft drinks through coin-operated vending machines.

Drinking places

"These are retail establishments primarily engaged in selling drinks such as beer, ale, wine, liquor, and other alcoholic beverages for consumption on the premises, and usually known as bars, beer gardens, cabarets, night clubs, saloons, tap rooms, and taverns. The sale of food frequently accounts for a substantial portion of the receipts of these establishments."

---

[34] U. S. Department of Commerce, Bureau of the Census, Census of Business--1948, Retail Trade, Merchandise Line Sales of Eating and Drinking Places. Bulletin No. 2-R-17, p. 5.

APPENDIX D

Statistical Methods Used

Need for additional information concerning classifications of eating places and the distribution of Minneapolis eating places into relatively homogeneous groups before their operations could be studied became apparent from careful consideration of available census data and of the literature on the industry. This need was met by use of the classification schedule given in appendix A in interviewing two sets of operators of eating places selected at random as described below.

Two random samples of approximately 10 percent each were drawn from a list of food-serving establishments in Minneapolis, compiled from records of the Inspection Division, Bureau of Environmental Hygiene, City of Minneapolis. Records of this Division are kept current by the process of recording the results of frequent inspections by district inspectors. The records are believed to be complete for the types of establishments inspected. The list was used for several reference purposes and no omissions were found. So far as is known, the list includes every commercial public eating establishment in the city in which meals are served, including cafes, cafeterias, hotels, and drinking places serving food. It includes also boarding houses and employee lunchrooms. It does not include hospitals, nursing homes, hotels without meal-serving facilities, lodging houses, drinking places having only confectionery and soft-drink licenses, fraternity and sorority houses, University of Minnesota eating facilities, and drug stores serving only fountain items such as ice cream and soft drinks. Some of the drinking places listed did not actually serve food at the time the establishments were visited by the study director.

The list follows the Inspection Division filing system of arranging eating places numerically by the "house number" of the business address, for example:

1 Washington Ave. So.
1 W. Lake
1 E. 26th St.
2 E. Lake
4 E. Lake
5 S. 1st St.
7 S. 6th St.
-
-
6148 S. 34th Ave. (end of list)

As a result of this arrangement, the first part of the list tends to include downtown eating places and the last part isolated eating places in outlying areas. The larger establishments are mostly in the downtown area such as 36 S. 7th St. and 114 S. 6th St.

The 10-percent samples were drawn by use of randomly selected digits (0 and 4); the serial position of the digits in a random number table was used to select serial positions in the list of 1,376 eating places. This method permitted selection of nonduplicating samples. (A systematic selection with random starts would have served equally well.)

The first sample consisted of 129 addresses from the list and the second sample of 137. Although, theoretically, this selection process should yield a 10-percent sample, or 138, the results secured here, 129 and 137, are well within random-sampling fluctuations.

Estimates of sales of meals and related items were made for all firms in both samples with the assistance of the operators of some firms, in addition to the 20 which became case studies. Distribution of establishments in the major categories of public eating places in both the samples and their estimated sales were generally in line with comparable city totals taken from the census. Estimates for other types of establishments were used to supplement census data in the preparation of table 4.

The first sample of 129 firms included 72 establishments which come under the public eating-place definition of the Census of Business. All but one of these answered the questions concerning buying and management practices. Both questions and answers are given in appendix B. As noted in chapter 4, the small size of the sample gives rise to a relatively large sampling error in the specific percentages cited in the interview results. However, supplemental, but nonstatistical information, obtained from discussions with restaurateurs leads us to believe that the findings are generally indicative of the practices of public eating places in Minneapolis.

A second objective was to obtain detailed data concerning costs of food, costs of operation, quantities of food purchased, and number of meals served for representative firms within each major category of public eating places. Adherence to the requirements of probability sampling techniques was not possible because many firms would be unwilling to cooperate by making available their records. Budget limitations also entered into the decision to select several firms representative of each of the major types of eating places, on the basis of the classification survey, which would be willing to cooperate. The findings of these case studies are presented in chapters 5, 7, and 8 of this report.

The eating-place industry in Fairmont is so much smaller than that of Minneapolis that it was possible to do case studies on half of the eating and drinking places in the smaller city. By careful observation of other establishments and discussions with cooperating restaurateurs, the information as to classification of all eating places, their sales, and their purchases was developed, providing complete coverage. Accordingly, these findings are considered to be quite accurate for the entire Fairmont industry.

APPENDIX E

Table 38.- Extent of purchasing in wholesale units by Minneapolis commercial eating places in case study group, 1949 1/

Commodity	Six medium priced cafes	Two counter service restaurants	Two hotels	Three cafeterias	All other 2/	Average 3/
	Percent	Percent	Percent	Percent	Percent	Percent
Beef, pork, veal, lamb:						
Wholesale	51	---	96	81	100	72
Semi-wholesale	46	100	4	19	---	27
Fish	97	100	100	100	100	99
Poultry	98	100	100	100	100	99
Group average						
Wholesale	60	5	97	86	100	76
Semi-wholesale	37	95	3	14	---	23
Milk	98	100	100	100	100	99
Cream	94	100	100	100	100	98
Ice cream and sherbet	100	100	100	100	100	100
Cheese	100	100	100	100	100	100
Group average	98	100	100	100	100	99
Butter	92	100	100	100	100	97
Lard	99	100	100	100	100	100
Processed shortening and salad oil	100	100	100	100	100	100
Salad dressing	99	100	100	100	100	100
Group average	95	100	100	100	100	99
Fresh fruit:						
Wholesale	83	---	100	100	100	85
Semi-wholesale	15	100	---	---	---	14
Canned fruit	100	100	100	100	100	100
Frozen fruit	100	100	100	100	100	100
Dried fruit	100	---	100	100	100	91
Group average						
Wholesale	96	73	100	100	100	96
Semi-wholesale	3	27	---	100	---	4
Fresh vegetables						
Wholesale	49	---	100	100	100	74
Semi-wholesale	50	100	---	---	---	25
Canned vegetables and soups	100	100	100	100	100	100
Frozen vegetables	100	---	100	100	100	91
Dried beans and peas	100	100	100	100	100	100
Group average						
Wholesale	82	51	100	100	100	90
Semi-wholesale	18	49	---	---	---	10
Potatoes and sweetpotatoes	100	100	100	100	100	100
Flour	99	100	100	100	100	100
Other grain products	100	100	100	100	100	100
Bakery products	100	100	100	100	100	100
Sugar and sweets	100	100	100	100	100	100
Eggs	94	100	100	100	100	98
Coffee and tea	100	100	100	100	100	100
Chocolate and nuts	100	100	100	100	100	100

1/ See text for description of semi-wholesale, chapter 3.

2/ Includes 2 high priced cafes, 3 department stores, and 2 fountain lunch establishments.

3/ Weighted by sales of all eating places in the groups represented by case studies.

Table 39.- Extent of purchasing in wholesale units by Fairmont commercial eating places in case study group, 1949

Commodity	Two hotels	Eight cafes	Hamburger shop	Steak house	Average 1/
	Percent	Percent	Percent	Percent	Percent
Beef, pork, veal, lamb	100	58	-	100	57
Poultry	100	96	2/	100	96
Fish	100	72	2/	100	81
Group average	100	63	-	100	61
Milk	100	100	100	100	100
Cream	100	100	100	100	100
Ice cream and sherbet	100	100	100	100	100
Cheese	100	44	-	-	44
Group average	100	98	100	88	99
Butter	100	100	100	100	100
Lard	100	86	2/	2/	87
Processed shortening and salad oil	100	90	-	100	84
Salad dressing	100	91	-	100	66
Group average	100	95	76	100	93
Fresh fruit	100	83	-	-	78
Canned fruit	100	78	-	-	66
Frozen fruit	100	100	2/	2/	100
Dried fruit	-	64	2/	2/	58
Group average	99	84	-	-	76
Fresh vegetables	74	48	-	-	35
Canned vegetables	100	80	-	-	53
Frozen vegetables	100	2/	2/	2/	100
Dried beans and peas	100	100	2/	2/	100
Group average	94	69	-	-	48
Potatoes and sweet potatoes	100	100	-	100	94
Flour	100	16	2/	-	19
Other grain products	100	35	-	-	37
Bakery products	-	-	-	-	-
Sugar and sweets	100	90	-	-	79
Eggs	64	92	-	-	63
Coffee and tea	100	100	100	100	100
Chocolate and nuts	100	48	2/	-	64

1/ Weighted by sales of all eating places in the groups represented by case studies.

2/ No purchase of this food group.

APPENDIX F

Table 40.- Typical restaurant operating percentages analyzed by type of service for the year 1940 1/

	Total United States	Table and Counter Service	Table Service Only	Cafeteria	Counter Service Only
Number of Restaurants	240	126	43	47	24
Total Annual Sales	$31,676,202	$14,541,174	$4,721,932	$10,614,651	$1,798,444
Monthly Average Sales	10,998	9,617	9,151	18,820	6,244
Percentages					
Sales	100.00%	100.00%	100.00%	100.00%	100.00%
Cost of Goods Sold	46.72	48.11	46.81	46.68	45.72
Gross Profit	53.28%	51.89%	53.19%	53.32%	54.28%
Expenses					
Salaries and Wages	25.74%	26.13%	25.71%	26.65%	23.62%
Social Security Tax on Payrolls	1.16	1.16	1.17	1.18	1.07
Laundry	1.58	1.63	1.88	1.94	.81
Fuel for Cooking	1.16	1.15	1.43	.76	1.47
Electricity and Lighting	1.64	1.62	1.38	1.55	2.36
Ice	.49	.55	.48	.35	.40
Menus	.54	.57	.44	-	-
Stationery and Printing	.21	.24	.25	.11	-
Cleaning Supplies and Expense	.75	.71	.44	.60	.59
Advertising	.88	.76	1.01	1.11	.78
Telephone, Telegrams and Postage	.19	.20	.25	.16	.12
Plants and Decorations	.13	.10	.22	.14	-
Federal, State and City Taxes and Licenses	.49	.54	.67	.32	.20
China and Glassware	.54	.64	.57	.34	.35
Silverware	.11	.12	.10	.09	.07
Linens	.36	.41	.30	.28	-
Kitchen Utensils	.16	.11	.19	.28	.13
Repairs	.79	.82	.85	.57	.92
Rent	5.23	5.15	5.10	5.12	6.05
Water	.28	.30	.25	.27	.23
Heat	.46	.40	.52	.52	.53
Insurance	.60	.60	.70	.61	.43
Depreciation	1.95	1.89	2.02	1.73	2.61
Amortization of Improvements	1.09	.93	1.30	1.30	-
All Other Expenses	2.30	1.81	1.86	2.21	2.06
Total Expenses	48.83%	48.54%	49.09%	48.19%	44.80%
Net Profit	4.45%	3.35%	4.10%	5.13%	9.48%
Memorandum:					
Cost of Employees' Meals	4.04%	4.34%	4.19%	4.80%	2.84%

1/ Reproduced from "Report on Nation-Wide Survey of Restaurant Operating Data for 1940" Prepared for the National Restaurant Association by Horwath and Horwath, Copyright 1941. Chicago, Illinois.

APPENDIX G

A Study of Kitchen Trimmings and Plate Waste in a University Cafeteria [35]

Control of food wastes is of considerable importance in the efficient operation of public eating places. Because so little information is available on the subject, a small pilot study of food wastes was made in the Agricultural Campus Cafeteria, University of Minnesota, University Farm. Analyzing the findings was difficult because of different uses of the various types of food in preparation of meals, the addition of water, and the impossibility of separating edible from inedible waste. However, the fact that the total of kitchen trimmings and plate waste amounted to about 18 percent of the net use of food commodities is significant in itself. Details are given in table 41.

The rather simple procedure developed for the study could be readily adapted to detailed controls over wastes in individual public eating places. Essentially, it involved calculation of the quantities of major foods used in a 3-week period in May 1951, separation and measurement of kitchen trimmings and of plate waste, and comparison of the amounts of trimmings and plate wastes with the total quantities of major food groups used.

To be more specific, a complete inventory of all food commodities was taken at the beginning of the 3-week period and again at the end. A tabulation was made of purchases of food during the period. Beginning inventory plus purchases minus ending inventory gave the necessary information on food supplies utilized by the cafeteria, that is, a measure of total disappearance of food. The kitchen trimmings were collected in four labeled containers and the plate waste was separated into seven specially labeled containers by the plate-scraping staff. No other waste-disposal facilities were available. The content of each container was weighed after the evening meal each day. Separation and measurement of waste were done by the regular employees under supervision of a junior student supervisor, after careful explanation of the purpose of the study and assignment of responsibilities. In addition to the weighing operation, the general character of the contents of each container was noted each day in order to keep close check on the separation and to inform the supervisory staff.

In analyzing the data obtained, the most difficult problem arose from the loss of identity of individual commodities which are combined with other foods or water in cooking. No waste was recorded for coffee and tea because of the addition of water in preparation of the beverages. Jelly, jams, sugar, and sirups were used almost entirely in food preparation so that for these wastes could not be measured separately. This was true also for extracts, spices, relishes, seasonings, baking powder, chocolate, marshmallows, flour, and to a lesser degree for cheese, eggs, fats and oils, and milk. Gelatine is used for both salads and desserts and pudding mixes are used only in emergencies. Both items involve the addition of a large amount of liquid. Small quantities of canned concentrated soups are used in emergencies, but most soups were made from basic ingredients by the cafeteria, thus complicating comparisons.

---

[35] The study was planned and made in cooperation with Miriam Scholl, associate professor of home economics and manager of the cafeteria, and Mary Byers, junior student supervisor.

Table 41.- Net food use or disappearance, kitchen trimmings and plate waste at Agricultural Campus Cafeteria, University of Minnesota, May 14-31, 1951 1/

Item	Net use	Kitchen trimmings		Plate waste		Total 2/	
		Quantity	Percentage of net use	Quantity	Percentage of net use	Quantity	Percentage of net use
	Pounds	Pounds	Percent	Pounds	Percent	Pounds	Percent
Fruits and vegetables	5,261	1,174	22	340	7	1,514	29
Meat and fish	858	3/ 157	18	3/124	15	281	33
Flour, bread, cereals, crackers	1,025	---	---	4/ 66	7	66	7
Cheese, butter, ice cream	408	---	---	(no butter, ice cream)		(cheese with other foods)	
Milk	2,428	---	---	37 (direct only)	2	37 (also with other foods)	2
Eggs	313	---	---	5/	5/	(with other foods)	
Fats and oils	286	(not recorded)		5/	5/	(with other foods)	
Sugar, sirups, jams, jellies	429	---	---	5/	5/	(with other foods)	
Gelatine and pudding mixes	20	---	---	5/	5/	(with other foods)	
Dessert waste		---	---	6/ 40	5/	40	5/
Soups, canned concentrate	7	---	---	7/ 17	5/	17	5/
Extracts, spices, relishes, seasonings	159	---	---	5/	5/	(with other foods)	
Miscellaneous 8/	113			5/	5/	5/	5/
Miscellaneous waste 9/				104	5/	104	5/
Total	11,307	1,331	12	728	6	2,059	18
Coffee and tea	59			(not recorded)			

1/ Survey planned and made in collaboration with Miriam Scholl, manager, and Mary Byers, junior student supervisor.

2/ Total of kitchen trimmings and plate waste. Kitchen trimmings are not an item of avoidable waste, nevertheless they represent a deduction from the gross poundage.

3/ Includes inedible waste such as bone.

4/ Includes water added in cooking cereals. Excludes flour used in preparation of other foods.

5/ Not separable.

6/ Includes sugar, starches, eggs, milk, some fruit, flavoring.

7/ Diluted soups plus wastes of those prepared from basic ingredients.

8/ Includes baking powder, chocolate, marshmallows, etc. Not comparable with miscellaneous waste.

9/ Mixed dishes made largely of starch and vegetables plus some cheese, meat, and eggs.

NATIONAL AGRICULTURAL LIBRARY
1022388661

NATIONAL AGRICULTURAL LIBRARY
1022388661